

**REVEALED** THE HOTTEST WEARABLE TECH OF 2015

# Stuff

GADGETS / APPS / GEAR  
SOUTH AFRICAN EDITION



## FLEX APPEAL

LG's 64-bit,  
self-healing  
superphone



## HOUSE PARTY

Multi-room  
audio tested

# DRIVE THE FUTURE



## TESTED

Merc S 65 AMG  
Robox 3D printer  
SmartWatch 3

*Powered  
by physics,  
driven by  
AI: this is  
the car of  
tomorrow*



## PROJECTS

Macro Photos  
Electronic Music  
Cylcocross

Where we're going,  
we'll need roads.

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ents enjoy  
as fast as lightning.

'hood10' to 43481

ere the the very limits of what's possible  
broadband meets the people, homes and  
ct to one another and the world in a way  
ker. Where the stuff of science fiction takes  
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ood you've ever lived in.



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Fibre

Fibre

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# HOW CAN WE



OVER  
**70** STORES  
NATIONWIDE



# MAKE TECH EASY?



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# WELCOME



You may've noticed the picture to the left is a little different this month (and decidedly less handsome). That's because I've taken over the editor's letter duties from our intrepid editor and publisher, Toby Shapshak. He still casts a beady eye over everything we do here at **Stuff**, but he's stepping back from the day-to-day administration.

It's hard to believe a quarter of the year is already behind us, but there's plenty to look forward to in the months ahead. Fibre networks are going to continue to grow, delivering world-class connectivity into more South African homes and businesses, and more of our appliances, vehicles and objects are going to get online and allow us to control them from the comfort of our smartphones. Meanwhile, where we're going we're (still) going to need roads, but it looks like we're going to be far less dependent on steering wheels, gear levers and pedals – self-driving cars are no longer the stuff of science fiction. We've rounded up the best of the **Future of Driving** (p38) to help you prepare.

This year, wearable tech is set to be another huge talking point – see our **Wearable Tech Awards** (p78) for the best of the current crop – though sales may not reach the levels manufacturers would like to see. The likes of Sony and Samsung are already on the third or fourth iterations of their smartwatches, but many consumers (this one included) are still reluctant to invest in devices that arguably don't do much more than current handsets.

Smartwatches don't yet have that killer feature that turns a piece of technology from a novelty into a must-have. Will the Apple Watch change that? We won't have to wait much longer to find out – by all accounts it'll be out next month and we'll bring you a detailed review as soon as we get our grubby paws on one. Meanwhile, check out our in-depth look at the **Sony Smartwatch 3** (p56).

Apple may be late to the game, but as its shown time and again – and most recently with the incredible sales figures for the iPhone 6 and 6 Plus in the larger-screen mobile market – we'd be foolish to write it off for its tardiness.

Until next month, keep your gadgets charged and your hands on the wheel. **S**



## THIS MONTH ON STUFF.CO.ZA

■ See **news**, **features** and read more **reviews** of the latest gadgets and much much more.



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**REMEMBER, the next monthly issue is ON SALE 23 Mar**

**Stuff** South Africa



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# THE PERFECT 10

When the occasion calls for a touch of vintage, Richelieu 10 Year Old is the perfect choice. This gold winning\* double-distilled, vintage brandy boasts a rich bouquet of aromas including chocolate, vanilla and green fig, a full-bodied palate and lingeringly smooth French Oak finish.

\*2014 IWSC Outstanding Gold



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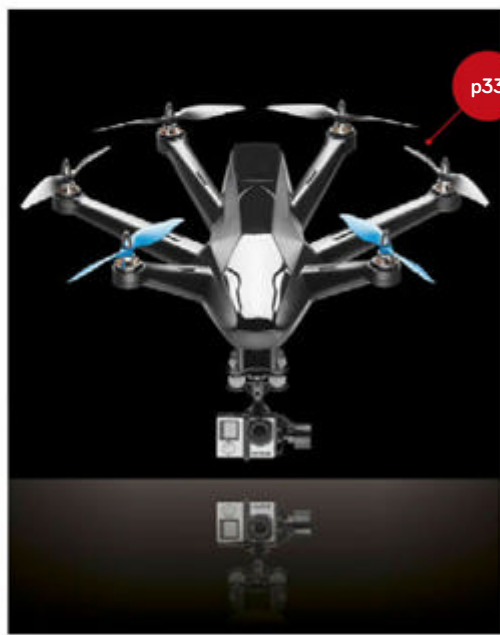
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**Not for Sale to Persons Under the Age of 18.**

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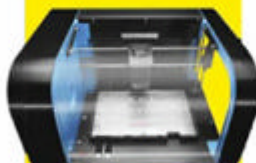
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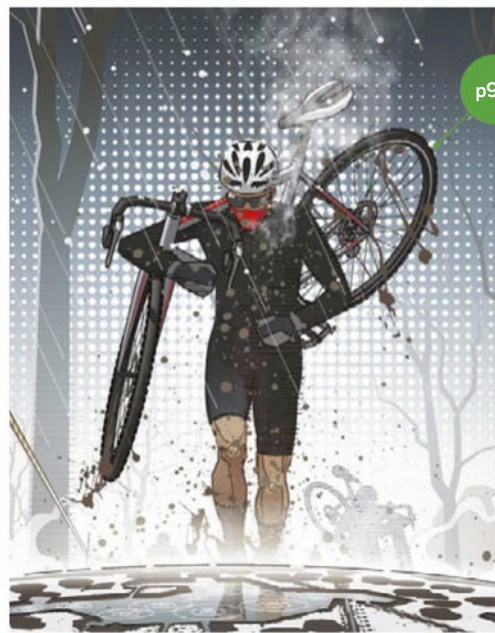
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You've got the queries, we've got the cures

## TOP 10 OF EVERYTHING

Looking to buy something but need a bit of advice? Turn to our *Stuff* Top Tens: our expert listings of all gadgetry, from p101

### CAMERAS

HOT BUY



**Olympus OM-D E-M1**

★★★★★

Ace autofocus  
p108

### HEADPHONES

HOT BUY



**AKG K451**

★★★★★

Wireless wondercans  
p111

### WEARABLES

HOT BUY



**Pebble Steel**

★★★★★

It's still our top smartwatch  
p105

# THE NEW BMW i8. A CARBON REVOLUTION.

Introducing the new BMW i8. Its progressive carbon fibre design shapes the future of sports cars. Fusing breathtaking performance with maximum efficiency\*, innovative BMW eDrive technology combines an electric drive with a BMW TwinPower Turbo combustion engine, achieving a combined power output of 266 kW, accelerating from 0-100 km/h in 4.4 seconds.

**#BornElectric**

**BMW i. BORN ELECTRIC.**



## BMW EFFICIENT DYNAMICS.

|    |                          |        |
|----|--------------------------|--------|
| i8 | 49 g CO <sub>2</sub> /km | 266 kW |
|----|--------------------------|--------|

\*Official fuel economy figures for the BMW i8: Weighted combined cycle: (2.1 l/100 km), CO<sub>2</sub> emissions 49 g/km, total average energy consumption per 100 km (weighted combined cycle) 11.9 kWh.



BMW i8



Sheer  
Driving Pleasure



H

O

T

S

T

HOT  
SIX  
#1

## FLEXY, EVERYTHING ABOUT YOU'S SO FLEXY

**LG G Flex 2**

Last year saw the introduction of two bendy phones. The first, the LG Flex, curved on purpose. The second, the iPhone 6 Plus, curved when fretful fanboys took their frustrations out on it. Are bananaphones in fashion, then? With the new G Flex 2, they might well be. Its flexible Plastic OLED (POLED) display is now 1080p, but slightly smaller at 5.5in/14cm. It's comfortable in the hand, it's resistant to drop damage and its rear panel even repairs itself when scratched, but it's not just tough on the outside. It's also the first phone we've seen with Qualcomm's hilariously powerful 64-bit Snapdragon 810 processor, backed up by a hefty 3GB of RAM. Add 32GB of expandable storage and Android Lollipop, and here's a phone you'll want to bend repeatedly.

**Ashot as... your yoga face**  
[Rtba / lg.com/za](http://Rtba/lg.com/za)





U

F

F

26 PAGES  
OF THE BIGGEST  
STORIES FROM  
PLANET TECH

### Hands-on with the G Flex 2

LG has a new spin pattern finish for the G Flex 2's rear cover: faint concentric circles that catch the light as it moves. It looks fantastic in the Flamenco Red colour that we got to try – a deep two-tone glossy red reminiscent of a classic Gibson. Even without its banana-like form factor, it would be a stunning phone.

Looks aren't worth a jot without ergonomics, however. The curve and lower 152g weight make

the phone feel natural in the hand and easy to grip. It's not notably flexy unless you put a bit of effort in, which feels right to us.

The self-healing rear panel of the first G Flex has been improved. LG tells us that minor scratches will now disappear in ten seconds, as opposed to three minutes, and we can confirm this. The cover itself can be replaced, but the 3000mAh battery is non-removable.

On paper, the G Flex's

OLED screen is not as sharp as that of its LG G3 stablemate. In practice it's plenty crispy, and without having both devices you'd struggle to miss the extra pixelage. Blacks are deliciously deep, colours are vibrant, and viewing angles hold up well.

From the brief time that we've spent with it, the LG G Flex 2 definitely warrants a more in-depth look – which we'll bring you as soon as we can.



## A REAL HEAD-TURNER

### Parrot Exom by Sensefly

Humans have learned a lot from nature: legs point in the direction of the floor, for example. The Exom quadcopter photo drone also borrows from homo sapiens' huge list of observations by having distinct head and body sections. The body and wings can waggle with the wind, but the head remains level and stabilised. This ensures that it can make the most of its various senses: high-res still photos, HD video and thermal cameras, all capable of working simultaneously. The engineers at Sensefly – acquired but not fully subsumed by Parrot – didn't do all this natural extraction for a cheap laugh, though. The Exom will be a serious drone aimed at commercial or industrial work, with a serious price to match.

**As hot as... your walking wiggle**  
[Rtba/parrot.com](http://Rtba/parrot.com)





HOT  
SIX  
#3

## 24-BIT BEAT BOX

### Sony Walkman ZX2

Having (barely) recovered from the blow of losing the iPod Classic, we're finding solace in a device bearing the trusty Walkman brand. The ZX2 is a satisfyingly chunky piece of tech designed to be the standalone high-res audio player that wandering audiophiles have been quietly clamouring for. It supports pretty much every high-res audio file type you care to name, up to 192kHz/24-bit quality, but if your collection contains some shamefully small files, fear not: it also has Sony's DSEE HX tech for upscaling nasty noise to lovely music. There's 128GB of internal memory, with another 128GB available via microSD.

**Ashotas...** studio-quality sound on the bus  
R12 000 (due mid-2015) / [sony.co.za](http://sony.co.za)



H O T S T U F F



HOT  
SIX  
#4

## HIGH-RES HQ Astell & Kern AK500N

Here is the modern equivalent of keeping your vinyl collection in a sealed concrete room with automatic fire extinguishers and a battlegroup of highly trained, dust-eating spiders. This Android-powered network audio server has four SSD drive bays, which can be arranged in a RAID array to instantly back up your collection – and we mean instantly, as it has a CD drive with one-button importing to DSD high-res formats. It has an audiophile's delight of digital inputs and outputs on the back and DLNA wireless too. Twin Cirrus CS4398 DACs handle the music with the sonic equivalent of white silk gloves and, while in use, the whole device switches to battery power to prevent any interference. Of course, you'll want to keep your AK500N in the sealed room, with the spiders.

**As hot as... a muso's bated breath**  
R160 000 / [astellnkern.com](http://astellnkern.com)





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**ETOUCH  
MORE**



## Aspire Switch 12

— ∟ ∟ ∟ ∟ 5 MODES

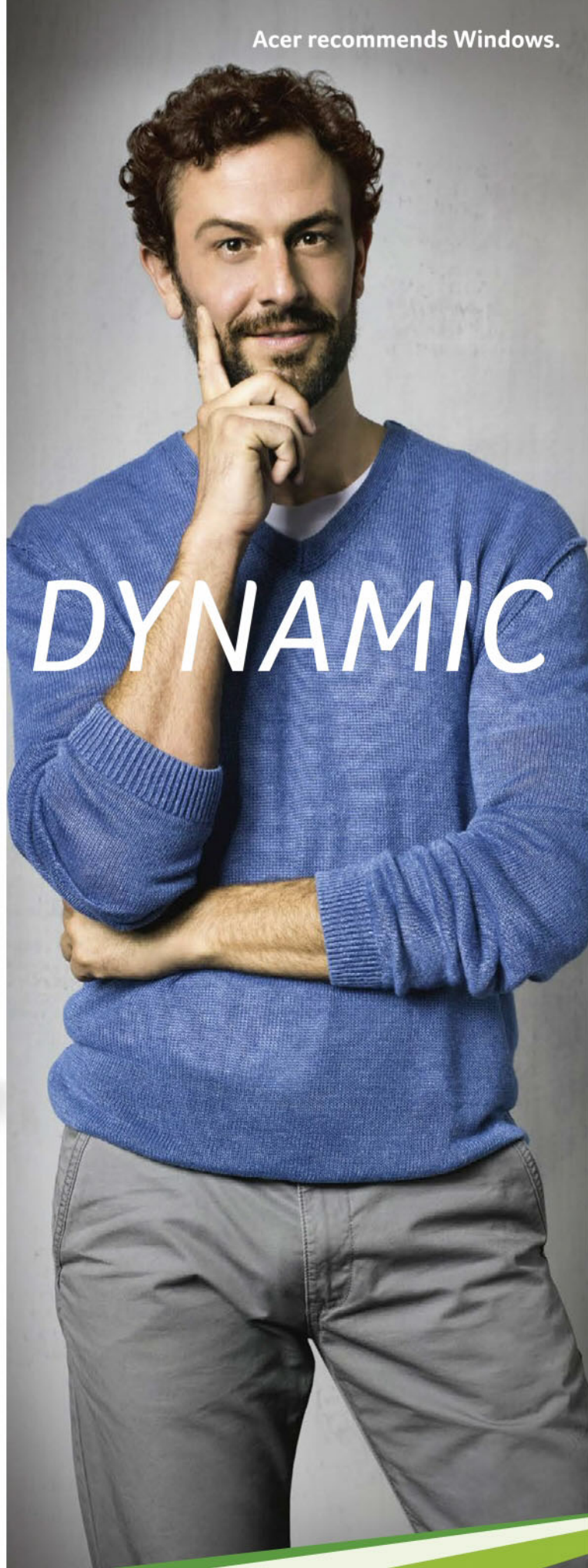
*Fluidly versatile.  
Stunning display.  
Outstanding performance.*

Explore endless possibilities and a touch more freedom with this super-flexible 12.5" FHD device. *Get in touch with the Aspire Switch 12 (SW5-271) at* [f](#)

*For a store near you visit [www.acer.co.za](http://www.acer.co.za)*

Acer recommends Windows.

**DYNAMIC**





HOT  
SIX  
#5

## KNOW HILLS LIKE THE BACK OF YOUR HAND

Garmin Epix

"He's got the whole world in His hands, got the whole wide world in His hands." Well, then, ask Him what the elevation of yonder ridge is, because we want to know if it's going to be dangerous to attempt it before nightfall. He doesn't know? Typical. Fortunate, then, that while we don't have the whole world in our hands, we do have topographical maps on our wrist. This new flagship Garmin watch combines all of the multisport/triathlon tricks of something like the Forerunner 920XT with the smart watch snazziness of the Vivoactive and the GPS navigation of an Edge or Oregon handheld. It has a 1.4in/3.6cm colour touchscreen with 8GB of internal storage, plus Bluetooth for smartphone sync. So tell your mate with the big hands that the Epix could show him a thing or two about epic adventures.

As hot as... the fiery pits of hell  
Rtba (April 2015) / [garmin.co.za](http://garmin.co.za)



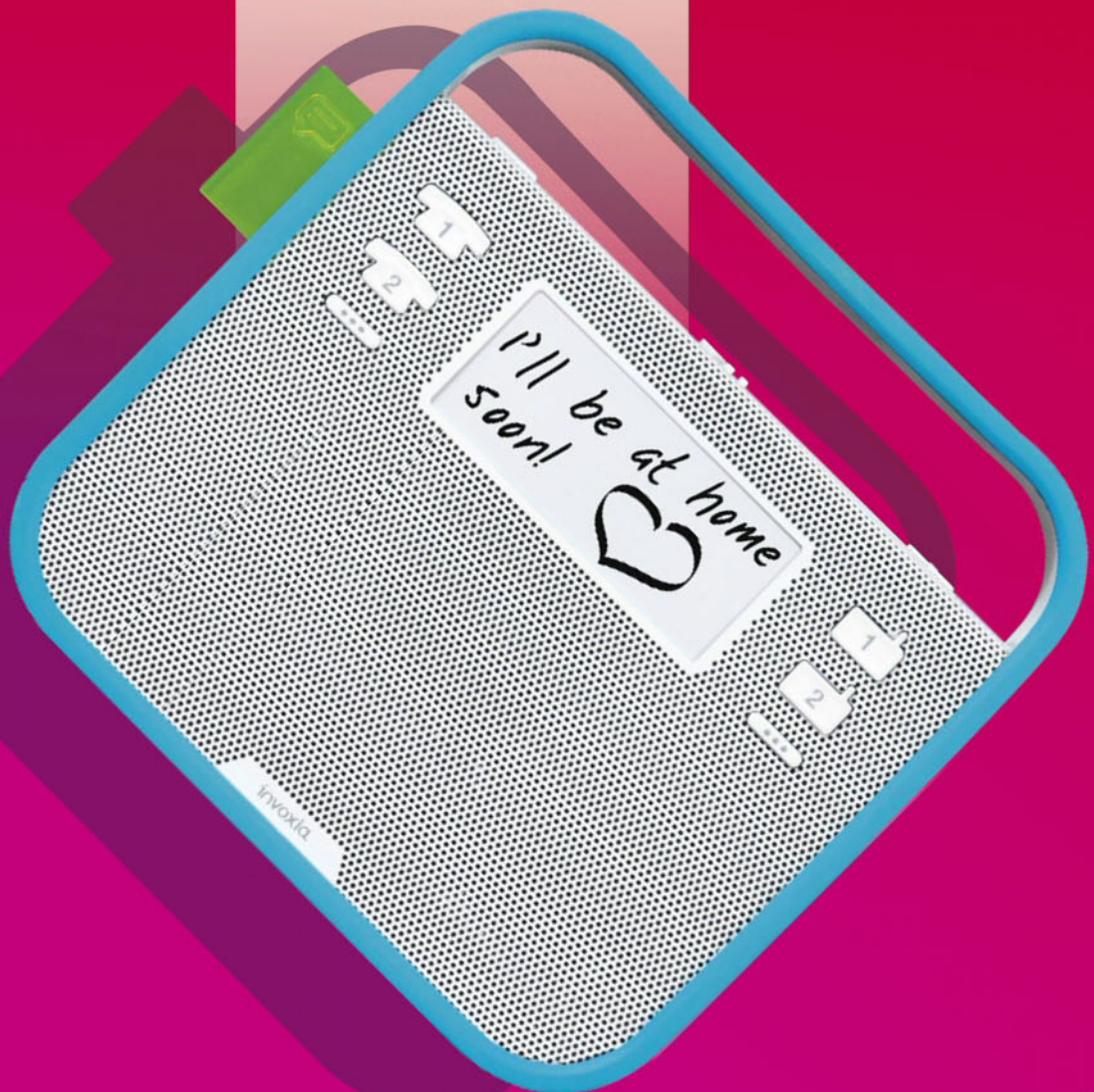
HOT  
SIX  
#6THE FRIDGE IS  
COOL AGAIN

## Invoxia Triby

Whatever Wi-Fi router manufacturers might tell you, the true 'hub' of any home is of course the fridge. It's often delved into on a purely speculative basis, or while chatting, and it has traditionally been the site for analogue message systems, such as passive-aggressive 'reminders'. But why have a paper note when you can have an E Ink message? Why frown at someone's request to take the bin out, when you can phone them using the Triby's VoIP call functionality and discuss whose turn it is? And why not investigate how different condiments taste on cold pizza, while you're at it?

As hot as... that half-eaten curry

R2 300 / [invoxia.com](http://invoxia.com)



# CURVE YOUR ENTHUSIASM

## Samsung ATIV One 7 Curved

R15 000 (import) / [samsung.co.za](http://samsung.co.za)

The Samsung's brain and curved screen fit into a package just under 4cm deep



**Your TV's curved, your phone's curved... so isn't it about time your home PC was curved too?**

### ● It's not very curved.

But then you're not going to be sitting very far away from it. The 27in/68.6cm non-touch panel has a curvature rating of 4000, compared with up to 11,000 for a curved TV. The reason for having any curve is immersion: it tricks the brain into thinking the screen is bigger than it is. Stupid brain.

### ● The brain isn't that stupid.

Because, while it might be suckered into generating

neuron-fire 'oohs' and 'aahs' about the immersion, it'll also be locking on to individual pixels. How easy is managing this feat of visual skill? Very easy, for the ATIV One 7 only has a 1980x1020 screen. This makes for a poor comparison with the 27in/68.8cm iMac, surely the most desirable of all-in-one home PCs, with its 2560x1440 standard or 5120x2880 Retina display.

### ● Comparing it to an iMac isn't exactly fair.

The ATIV One 7 will retail at \$1300, for which a straight tax-notwithstanding conversion would be about R15 000. Which ain't iMac money. The rest of the

specs bear this out: a Core i5 processor, 8GB of RAM and integrated graphics. There's a 1TB 5400rpm hard drive and a slew of USB 3.0 ports but no optical drive. But be not downhearted, for some Samsung add-ons will make the ATIV more fun to use than its specs would suggest. SideSync 3.0, for example, shows desktop notifications from your Galaxy mobile. Whoop! Get it bought!

### ● You can't buy it.

Ah. Samsung tells us it doesn't plan to bring this model to SA, but they might be planning a higher-res version for us... Or you might just need to order one from the States.



## In other Samsung news:

### ● Ring radiator speakers

The WAM-6500 and WAM-7500 are wireless speakers that – as is the current trend – fire music out on all sides, so that no-one is left out. The 6500 has a battery for portability; the 7500 can be affixed to a stand or hung from the ceiling.



### ● SUHD TV

Infuriatingly, the 'S' simply tells us it's Samsung's new high-end UHD TV, rather than standing for anything. These contain nanocrystal semiconductors – AKA Quantum Dot technology – and run Tizen OS. The results are still 4K but more 'spectacular'...



# B&O BEOSOUND MOMENT

R31300 (import) / bang-olufsen.com



## Would you mind explaining what this is?

Okey-dokey. But we'll start with what this isn't. The Beosound Moment is not a speaker. You'll need one of Bang & Olufsen's wired or wireless active speaker systems to get it to put any noise in your noiseholes. What this is, though, is an 'intelligent' wireless music controller. It'll choose music – from your network-attached storage, from your mobile device

or via Deezer's online service – and it'll play it. Intelligently.

## OK, I'll bite. What's the 'intelligent' story?

It has 'PatternPlay', which B&O claims will learn what music or radio stations you play at certain times of day. Press that pretty wooden button on the controller and it should play something you're ready to hear. If not, you just lift it up – ta-daa, it's

actually a tablety thingy – and on the other side is a more conventional-looking aluminium control layout with a LCD screen. But there's more.

## More?

More! On that LCD screen, you can display a Mood Wheel. The colours denote emotions. Touch a colour and you'll hear appropriately emotive music from your own collection; but slide an exploratory

finger further out on the wheel and the Moment will go a-hunting on the internet for something new, surprising and/or horrifying. Either way, it's all a bit unique, which is what we'd expect from the Danish design dons. And what we'd want from a R31300 spend – this is Big Daddy B&O, remember, not the relatively affordable headphone and Bluetooth speakers spin-off known as B&O Play.



TOUCH A COLOUR  
AND YOU'LL HEAR  
APPROPRIATELY  
EMOTIVE MUSIC

## Advanced string theory IK MULTIMEDIA iRIG 2

The original iRig heralded the start of an appcessory revolution. At the time, we thought: "Look at this novelty item that lets you connect your guitar to your smartphone. What a brief laugh we will have with it!" Years later, our phones are linked to everything from dog feeders to drones, and a second iRig has come along to make a mockery of our earlier dismissiveness. This new one works with Android, as well as iPhone, and has 1/4in jacks for both input and output. So you can run your smartphone-sampled guitar sound straight out to an amp, not just straight into your headphones.

R435 (pre-order) / [store.orange.com](http://store.orange.com)



### ALTERNATIVELY...

#### Samsung Portable SSD T1

Solid-state innards make this Samsung drive credit-card-sized and super-fast, but a 1TB version will probably cost about R8 700. **from R2 700 (250GB) – (import)**



## It sees you better than you see yourself LACIE MIRROR

Following in the pensteps of Philippe Starck and Neil Poulton, LaCie's newest designer drive is by French objectsmith Pauline Deltour. Her trademark study of everyday objects is apparent in that the Mirror has mirrored sides, meaning it doubles as a mirror. Gorilla glass should prevent scratches if you take it out, and it's USB-powered so doesn't need a mains adaptor. We would suggest that, while as a mirror it reflects you, its 1TB of storage better reflects you by containing all the files that make up your digital soul. But Pauline's the designer, not us.

R4 000 (import) / [lacie.com](http://lacie.com)

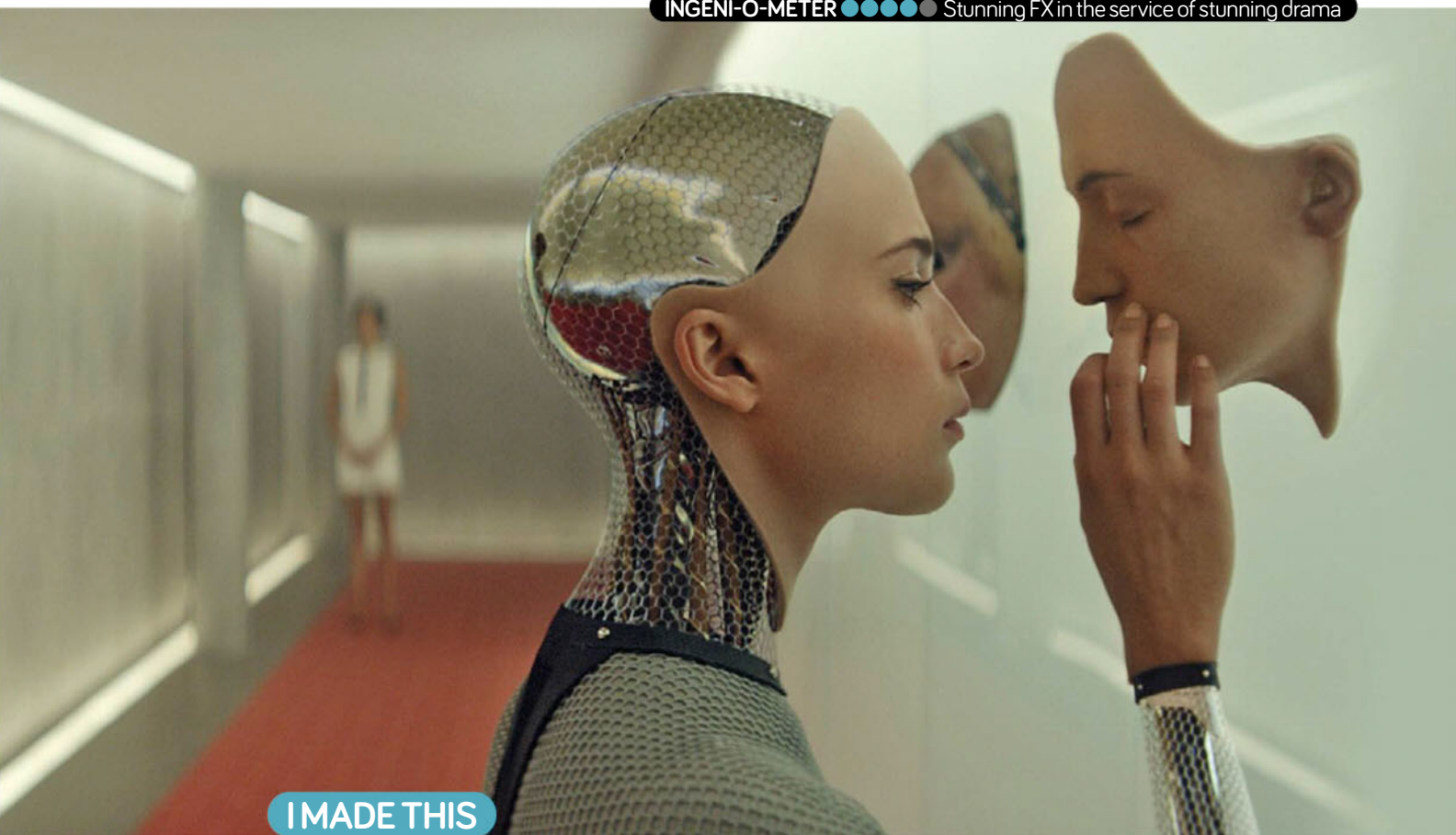
## Where are my EYES!? Oh, there STEELSERIES SENTRY EYE TRACKER

Game streaming is the hot new spectator sport that you don't know about. Instead of playing a game, you watch a live stream of someone else playing the game, while they simultaneously talk to the watching audience, listen to questions and generally make the whole thing look really damned easy. If they're also using an Eye Tracker you can see – in real time – where the über-gamer is looking while they play. The endgame of this is that you improve your own skills by comparing it – so long as you also have an Eye Tracker – to where your eyes are going.

R2 800 / [steelseries.com](http://steelseries.com)







I MADE THIS



## A SCI-FI THRILLER WITH BRAINS

Alex Garland on directing *Ex Machina*

**I've been interested in AI since I made a 'Hello World' program on a ZX Spectrum as a kid.** I mean a kind of AI that doesn't exist yet, which is sentient and self-aware. I get fixated on a subject and then a story floats out of it years later. I was in working on the *Dredd* screenplay and this fully formed idea for *Ex Machina* [in which a young coder becomes the human element in a Turing Test] arrived.

I want people to forget that Ava [above] is a robot, while seeing

### "I DON'T FEEL ALARMED BY TALK OF CONSCIOUS, SELF-AWARE MACHINES. THEY MIGHT BE BETTER THAN US"

that she's a robot. Humans find it really easy to project emotion onto inanimate objects, let alone animate objects. The hard thing is stopping them from doing it. It's easy to find a child who believes their teddy bear has sentience;

the tricky thing would be finding one who says it's just a bit of old cloth and some stuffing.

The film wouldn't work unless it was supported by Double Negative's visual effects. Ava's a real blend of practical and visual effects. Alicia Vikander [who plays her] wore a prosthetic that created a kind of mask face and a ridge so there was something to map the CGI onto. She also wore a bodysuit, which is the mesh you see over her chest and shoulders. We were actually still tweaking stuff when we shot it.

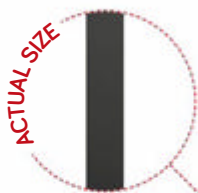
In the film the back of Ava's head and her neck are robotic, but that wasn't the original intention. It was just going to be her legs, arms and torso – but we realised that every time we went to a close-up of her face it felt like we were doing it just to frame out difficult visual effects, so in the end we put them

into shots that we hadn't intended them to be in.

The people who are funding this technology in a heavy-duty way are Google, Facebook and the big tech companies, because there's real value in computers that can speak in a particular kind of way. Siri is good but it can't really speak, not like a person can. You know in moments that you're not talking to a human.

But I don't agree with Stephen Hawking [who recently said AI could spell the end of the human race]; I think AI's a good thing. If we're talking about AI as a conscious, self-aware machine with an emotional life in the way we have one, what you are saying is that the creation of a new consciousness is something innately problematic. I would say that every time people have a child they create a new consciousness, so I don't feel necessarily alarmed by it. I also think it's perfectly possible that the new consciousness might be better than us in various ways – and if that's the case, why on earth would you want to stop it?





### 4K and 4.9mm SONY XBR-X900C

There are many questions you ask yourself when buying a TV, from how many pixels it has to whether you can afford it, but there's just one you should be asking: is it thin enough? Tech law states that a thinner gadget is a better gadget and Sony's new Bravia models are the current champions. Yes they have 4K processors, an Android TV OS and voice search – but the real appeal is their svelte 'floating' frames. At their slimmest they're just 4.9mm deep, which is enough to make an iPhone 6 look chubby. Just don't try putting one in your pocket.

Rtba / [sony.co.za](http://sony.co.za)

### Bedazzling beats

### PIONEER DDJ-SZ-N

An amp that goes up to 11, go-faster stripes, air capsules in your shoes – there's little tangible benefit to any of these things, and yet we pay more because they make us feel zippy. Likewise with this gold edition of Pioneer's almost-professional-level digital DJ deck. It's the same as the black DDJ-SZ – Serato control, dual USB, two different hardware FX panels, CDJ-style LED panels in the jogwheels – but it's gold and limited to 1000 units. And with that glittery finish costing just R1700 over the standard version, you'd get at least one. Right?

R27 000 (pre-order) / [soundselect.co.za](http://soundselect.co.za)



## DROP EVERYTHING AND DOWNLOAD...

### Evernote Scannable Free / iOS

That huge pile of bills and statements on your kitchen table is a negative force in your life. You know there's important stuff in there, but dealing with it means getting the filing box out of cupboard and concentrating and blah. New process. Open post the day it arrives, fire up Evernote Scannable. It lets you instantly photo-scan the document, then it flattens, re-contrasts and resizes the image. Share it to Evernote. Throw the paper bill in the recycling. Done. You still haven't paid the bill, but at least the kitchen table is clear.





### Transmatroller MAD CATZ L.Y.N.X.

"Darling?" says your gender-unspecific partner. "A large wodge of cash has left our account. Was it you?" As a vein throbs on his/her forehead, you explain how you've spent hundred of rands on pre-ordering a Bluetooth controller for mobile gaming. A second vein now. You forge on: it splits in two, in order to clip onto different phones and tablets. It has dual analogue sticks, shoulder buttons and a mini keyboard! "I got one for each of us!" you say to the back of a slammed door.

[Rtba / madcatz.com](#)



### Weaving a web of hi-fi CAMBRIDGE AUDIO CXN

There was a time when any kind of music streaming would send audiophiles running for their caves, clutching their huge, misshapen ears in pain at the lack of dynamic range. But now streaming is all grown up, with suitably high-end kit like the CXN. It'll stream from your own collection or online services at up to 24-bit/192kHz quality, using Wi-Fi, Ethernet XLR or AirPlay, and it also works as a preamp thanks to its 32-bit Blackfin DSP. Just remember to feed it full-fat, high-res files.

[from R5 200 \(import\) / cambridgeaudio.com](#)

## ? WTF IS THE IMPECCA ALERT BAND?



### Is it a Wi-Fi-boosting Alice band?

No, and nor is it a Geordi La Forge-style image-enhancing visor. Did you know that during *Star Trek* filming, the prop visor that was supposed to give his character amazing multi-spectrum vision actually caused the actor to walk into everything? And gave him headaches? Them's the breaks. Anyway, it's not that. It's a brainwave-detecting headband. When it senses that you are about three minutes away from falling asleep, it sends a notification to your phone.

### What, to wake me up? That'll be bloody annoying.

Yeah, but just think about how pleased your passengers will be when they find out their journey doesn't take a surprise detour through two fields and someone's living room. Reveal! It's a driving device, to make sure you don't overdo it behind the wheel and end up testing your car's safety rating while already unconscious. In fact, the Alert Band was dreamed up by someone whose friend was injured after being hit by a dozy driver. But therein lies the problem with a gizmo of this kind: assumed responsibility.

### Ah, because the driver who might consider wearing this is the one who's less likely to need it?

Exactly. A professional road warrior – such as Trucker Tobias or Regional Sales Sandip – might argue that their experience is superior to the Alert Band. Whereas the infrequent long-distance driver – Driving Home For Christmas Derek – might be more aware of their susceptibility, but will likely turn their nose up at the R2 900 asking price. So, unless it's made compulsory or built in to cars' safety systems in the future, better file it under 'interesting'. And in the meantime (and forever after), we dearly hope it doesn't occur to our bosses to implement it at our desks...





### NEW YORK NIGHT FLIGHT

Sometimes art just falls out of its creator, like a sudden sneeze. Other times, it has to be coerced into being, and photographer Vincent Laforet employs more coercion than most. When his usual helicopter pilot refused to fly at the altitude needed for these shots – 2300m, so high that they were above the airliners on approach to JFK airport – he found a more daring flyer. Next issue: finding a camera and sets of standard and tilt-shift lenses fast enough to overcome the helicopter's vibration and wind buffeting... oh, and a good strong harness. You know, for when he was hanging off the helicopter.





### INTEL UNVEILS BUTTON BRAIN

Intel's tiny new brain for wearables, called Curie, has a processor, sensors and Bluetooth hardware, and is designed to run on very little power. Fancy using it to build your own megaselling wearable wonder? Head to p78 for some inspiration.



### GOOGLE ADDS AUDIO FLING TING

Not just video no more, later this year Google will add the ability to fling content from a variety of music apps to networked speakers around your house. Good news: the wireless speaker will do the actual streaming, not your phone. Bad news: no mention of Spotify compatibility. Yet.



### CANON SIMPLIFIES YOUR MEDIA MESS

Canon's new Connect Station is a 1TB media bank that wirelessly pinches pics and videos from your camera or phone, then acts as a wireless server that can pipe the content to your TV. It's like the Ghostbusters Ecto-Containment Unit, but for your holiday snaps.





## ? WTF IS THE CONNECTED CYCLE PEDAL?

### Well, there's a clue in the name...

Oh, smarty pants. Yes, it's a bike pedal but it's the first connected one we've seen. Within the body are GPS and GPRS chips. The idea is that if your bike moves while you're not on it, it'll send a push notification to the app on your phone. "Zut alors!" it'll say, for Connected Cycle is a French company, "Regardez votre vélo!" The tracking tech isn't lazy when you are on board either: it'll serve up some basic fitness data about distance travelled, though it sounds like the company is more focused on anti-thievery cooperation.

### GPS, huh? Sounds likely to be battery-intensive.

Ah, oui, bien sur. But here's clever: the rotation of the pedals (while you're cycling) charges the battery. Isn't that neat? I think we might be spurred to cycle all the faster just to jazz the little buggers up — and on steep hills, with the grinding of the dynamos all too audible over the sound of the blood pumping in our ears, to do a little Gallic cry.

### Couldn't le petit miscreant just whip the pedals off, lickety-split like?

La nope. For Connected Cycle has seen fit to give the pedals a unique tool for undoing duties rather than stick with the conventional Allen key or pedal spanner. Which, like similarly unquified locking wheel skewers, is all fine and dandy until you lose the tool. But we're projecting; so far this is just a concept. Allons-y, Connected Cycle!

Rtba / [connectedcycle.com](http://connectedcycle.com)



## A-do run, run, run PARROT ZIK SPORT

These zany headphones not only know how fast your heart's beating, but how many steps you're taking, how long your feet are in contact with the ground and your cadence in steps per minute, thanks to accelerometer tech in those head pads. They also have noise-cancellation so that, via Bluetooth, you hear more of the upbeat music than the outside world laughing at your shambling stagger.

Rtba (due mid-2015) / [parrot.com](http://parrot.com)



## Pump up the volume REEBOK ZPUMP FUSION

Remember the original 'wearable tech' revolution in the '90s? No, not calculator watches, but trainers with bonkers cushioning systems. Nike Air vied with British Knights and LA Gear, but it was Reebok Pump that took kicks to new inflatable heights. Now the tech has returned in these running shoes. Press the button on the heel, and it will slowly lock around your foot for a snug fit. Not quite self-lacing, but the next best thing.

Rtba (due March) / [reebok.co.za](http://reebok.co.za)





### More than just a pair of bezels DELL VENUE 8 7000

Dell calls the 8.4in/21/3cm, 2560x1600 OLED screen on its latest tablet an 'infinity' display. Which is perceived as being a good thing. But a truly infinite display would be a bummer. "Where's the Chrome shortcut icon gone? Oh, it's six light years over there. Damn." And just think how much it would weigh! We're being silly. What Dell should be shouting about is how this Android tablet is thinner than an iPad Air 2 at just 6mm. It's also the first tablet with Intel's Real Sense 3D camera tech, giving you Lytro-esque post-processing abilities, and has a 2.3Ghz Intel Atom quad-core chip. Infinitely more exciting than tiny bezels.

Rtba (due early 2015) / [dell.co.za](http://dell.co.za)

### Defenders in the Earth LAND ROVER DEFENDER

Tinker, tailor, soldier, sailor, hipster, headmaster, kiteboarder and monarch. Defenders have been called into service by anyone and everyone for the last 32 years, but the idea of driving around in a two-tonne oblong of hardened metal has gone out of fashion. Three limited-edition models mark the Defender's final year of production: the beefy Autobiography Edition, the even more swarthy Adventure Edition (pictured), and the classic Heritage Edition. All have unique styling and upgrades, including Windsor leather interiors, which honour an automotive icon but also mean you won't want to fill them with muddy spaniels. Which, with a Defender, is sort of the whole point.

from R485 000 / [landrover.co.za](http://landrover.co.za)



### ALTERNATIVELY...

For a little more money you can lug some batteries about, in the lovely form of these now-wireless Sennheiser Momentums: Bluetooth and noise cancelling for about R6 100, when they get here.



### Sippin' on choon and juice PHILIPS FIDELIO NC1L

Philips' new Fidelio NC1L headphones are something of a mould-breaker: they're the first active noise-cancelling cans that don't require battery power. Instead, they draw energy and audio from your iPhone or iPad through the Lightning port. An on-board 24-bit DAC converts the digital audio into delicious analogue sound. The noise cancellation tech has additional modes for muffling the hum while letting other external noises through – for when you're listening for a train announcement, say – as well as optimised hands-free phone-call use.

Rtba / [philips.co.za](http://philips.co.za)

### Not a Spellond mistake

## SADES A-60 SPELLOND GAMING HEADPHONES

These cans are on track to break the stereotype of poorly-built Chinese products by bringing a new name to gaming headphone heavyweights.

They do not look fashionable at all with their strange sharp-edged design, but definitely wins some comfort-points with their squishy leather interior. It also looks promising for those who enjoy blasting loud sound through their brains. Going back to the Chinese stereotype, in a good way, the Sades A-60 headphones will cost you about a grand, which is nothing compared to the serenity of blocking out the outside world.

R950 / [gamersgadgets.com](http://gamersgadgets.com)



### Tiny but deadly

## AORUS X5

In one corner, weighing in at 2.5kg, we have the Aorus X5, and in the other corner, we have a scrawny gamer. When travelling, you won't need to be able to bench a PC if you intend to join your friends for a LAN. This tiny gaming laptop has a big heart. To be precise, this tiny laptop has a pair of GTX 965M graphics cards and a UHD IGZO display packed into the ultra-thin 15.6-inch chassis. This will be the most appropriate machine for those looking to travel with ease to their gaming destinations.

Rtba (Expected mid-2015) / [aorus.com](http://aorus.com)



### Pair of Air

## AIR MAX 1 ULTRA MOIRE

Since Nike took their first steps with their Nike Air tech in 1979, they have changed air-wear footwear history. In 2015 Nike's infamous Air Max crew gets a new gang-leader, the Air Max 1 Ultra Moire. With the use of less material, less weight, and even more flexibility, it could almost pass as a high-class stripper. The outer body is covered in laser-perforated synthetic suede for extreme breathability and movement. By the time you read this, the Ultra Moire will have been the first of Nike's 'Sneaker of the Week' program that will feature their best up-and-coming sneakers weekly in 2015. Not a bad honour.

R1600 / [nike.com](http://nike.com)







### Touchiest Chromebook yet HP CHROMEBOOK 14 TOUCH

You don't buy a Chromebook to impress your friends. Unless your mates are the type who are impressed by subtle refinements of portable computing productivity-per-kilo. But were you in the market for a laptop running Google's light weight, cloud-based Chrome OS, yet were determined to get one packing some heat, you'd get this one. It has a Full HD touchscreen, as well as double the RAM (4GB) and storage (32GB) of the original HP Chromebook 14. The only trouble is, you'd be paying the kind of money that could well get you a 'proper' laptop. Or so your unimpressed friends will say.

R5 080 (import) / [hp.com/za](http://hp.com/za)

### Biggest Chromebook yet ACER CHROMEBOOK 15

Whether or not you bought the HP to impress, its enhancements over a standard HP Chromebook 14 are not immediately apparent to an onlooker. But this Acer, with its ostentatious 15.6in / 40cm screen – the biggest of any Chromebook yet to grace the crust of our planet – screams its superiority to the sky. Like the HP, it's a 1080p screen, and it has Intel hardware in the form of either Core i3 or Celeron processors – with varying RAM and storage to suit. It's not as light as 'books of yore at over 2kg, but the Acer is aimed at people who want to get stuff done, not just impress their friends.

Rtba / [acer.co.za](http://acer.co.za)



## START MENU

The month's best concepts, start-ups, crowdfunded projects and plain crazy ideas



Robot chef

**COOKI**

[sereneti.com/](http://sereneti.com/) / from \$400 (R4620)

What do you get if you cross a robot arm with a motorised tray of ingredients? Dinner, dinner, dinner, dinner... Batman! No, wait. What does Batman's mom say when she sees an invention that automatically cooks and stirs the supplied ingredients? "Holy smoke!" No?

Why did Batman spend all his time picking recipes for Cooki to attempt? Because there were no reports of anyone Robin. Oh, forget it.

Status

Seeking funding (Indiegogo)



Got any gum?

**MINT**

[breathometer.com/](http://breathometer.com/) / \$150 (R1730)

Humans have been surviving with the cupped-hand method since the development of social groups. But now we have Mint, a Bluetooth LE widget that measures volatile compounds that might indicate poor health as well as pongy breath. It also reports on hydration levels, although the paranoia that drove you to test your breath in the first place might mean you need to drink more water.

Status

Funded (Indiegogo)



Key-bored

**PIANU**

[playpianu.com/](http://playpianu.com/) / from \$45 (R520)

In school music lessons the keyboards, with their whizzy sound effects, were cool. Then we got older and guitars signified Dimebag Darrell and beach parties. You can't plug a keyboard in at the beach. But times have changed (again), guitars are for hipsters and we're fickle, so we're more into this roll-up midi keyboard and its browser-based, *Guitar Hero*-esque tutorial service. For now...

Status

Funded (Kickstarter)

# PIZZA DELIVERY MAN PLAN IS A GO-GO

## Gogoro Scooter

Rtba (concept) / gogoro.com



The Panasonic lithium-ion batteries have a handle for quick pitstops

**An electric scooter is the perfect urban transport solution, with only two factors holding it back... namely 'electric' and 'scooter'. But two ex-HTC execs have the answer**

### ● The issue with electricity is...

Where does a city dweller get it from? An increasing number of homes and workplaces have electric vehicle hook-ups, but it's still a tiny proportion. Are you going to run an extension lead out of your first-floor flat window

down to the street? No, say Taylor and Luke of Gogoro. You're going to pay them a subscription and hot-swap your battery at roadside Gogoro GoStations. Smartphone apps will help you find the nearest GoStation, and the founders say the system will be smart enough to keep the stations efficient.

### ● Which leaves 'scooter'.

A word with negative associations in the minds of most of us, it speaks of tracksuited teenagers with holed exhausts. Electric scooters have yet to find a hero, despite such varied efforts as BMW's expensive

C-Evolution and Yamaha's toy-like EC-03. So Gogoro designed its own. They've chosen their friends – Panasonic batteries, Philips LED headlights, Maxxis tyres – but designed a lot themselves. Hence: 6400W power, 0–50km/h in 4 seconds and a max speed of over 100km/h. At urban speeds, it should have a range of about 100 kilometres. Crucially, because the batteries are part of the subscription deal, the entry cost should be within reach of us norms – though pricing is yet to be announced. This could be the electric scooter revolution we've all been waiting for.

**YOU'LL PAY A SUBSCRIPTION AND HOT-SWAP YOUR BATTERY AT ROADSIDE STATIONS**



BMW  
Original Parts

[www.bmw.co.za/  
originalparts](http://www.bmw.co.za/originalparts)



Sheer  
Driving Pleasure



# ONE PART CAN CHANGE THE OUTCOME.

## BMW ORIGINAL PARTS.

This is a simple o-ring. Almost as big as your thumb. Seemingly insignificant. On January 28, 1986, a single faulty o-ring brought down an entire space shuttle, mid takeoff. In a complicated chain, it takes only one part that isn't as sophisticated and meticulously crafted to compromise the whole machine. Don't take chances. Insist on BMW Original Parts, because without genuine parts, it's simply not a BMW anymore. **For more information visit [www.bmw.co.za/originalparts](http://www.bmw.co.za/originalparts)**

All BMW Original Parts carry a 2-year unlimited mileage warranty.



## FIRST PLAY THE ORDER: 1886 PS4

As you abseil down the side of an airship high above Victorian London it's hard not to stop and take in the view. You are Grayson (aka Sir Galahad) of The Order: a group of smartly dressed secret agents with even more impressive facial topiary than the editorial staff of *The Chap*.

In this parallel version of the late 1800s, the typewriter isn't the height of technology. As you sneak through the ship offing guards with well-timed takedowns, you're able to communicate wirelessly with your fellow agents, override

onboard power systems using a steampunk-inspired hacking device and pick locks using the more nuanced vibration in the PS4's DualShock controller for feedback. The guns might be ahead of their time but they still feel like blunderbusses: all shock and awe in the flash and bang departments.

The problem is, developer Ready At Dawn has made the scenery so beautiful you're not allowed to damage it. Pots and pans go flying as you fight through the galley but the room itself remains unscathed.

This third-person shooter often looks as if you're playing a cut scene, with a cinematic quality that's the opposite of *GTA V* or *Far Cry 4*'s free-roaming chaos. In Los Santos and Kyrat it feels like anything can happen, whereas *The Order*'s world is so intricately created it's more like you've stepped onto a big-budget film set. Gaming's crying out for tightly scripted, well-told stories, but if you feel like you're merely the director rather than playing the heroic lead, it's in danger of making you want to shout "cut".





## REVEALED XBOX RACER CELEBRATES ITS 10TH ANNIVERSARY

## FORZA MOTORSPORT 6

Xbox One

It wasn't just Ford's asphalt-eating GT that was unveiled at last month's North American International Auto Show in Detroit. Microsoft took the opportunity to announce another giant of the motoring world: *Forza Motorsport 6* for Xbox One. This year marks the 10th anniversary of the series and Xbox promises big things. 'Promise' being the operative word; very little was actually announced, and even less was shown.

We'll have to wait until gaming megashow E3 in June to see it in motion — and probably until the end of the year before its release — but we do know this: Ford will feature heavily, as the gobsmackingly gorgeous Ford GT will not only grace the front cover but also be drivable in the game. It joins the Shelby GT350 Mustang and F-150 Raptor, all of which are 'First in *Forza*' releases that will appear in *FM6* before they're available anywhere else. It might be the closest many petrolheads will get to these cars, but if *Forza*'s previous form is anything to go by, it should be pretty special. Wanna see more of the cars of the future? Flip to p38.



## DLC 3 TOP GAME EXTENDERS

FORZA HORIZON 2  
STORM ISLAND

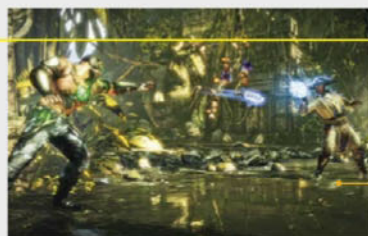
If the thought of *Forza Motorsport 6* (above) has greased your wheels for a bit of racing, *Horizon 2*'s first DLC pack adds a whole new island to tear up. Off-road events are the name of the game as it swaps the sunny Mediterranean coast for the rain-soaked Storm Island.

FAR CRY 4  
ESCAPE FROM DURGESH PRISON

*Far Cry 4*'s so massive it's unlikely you've finished it yet, but if you're itching for more, *Escape From Durgesh Prison* is a good place to start. You've been captured but, like all good egomaniacal villains, Pagan Min is willing to let you go if you can beat a set of challenges and do it fast.

ALIEN: ISOLATION  
SAFE HAVEN

If your nerves can handle a trip back to the Sevastopol, this expansion puts you in the shoes of a new character called Hughes, who's ensconced safely in the bowels of the ship — but supplies are running out. Can you venture out and complete all 10 tasks without losing your one life?



## INCOMING

## MARCH

- BATTLEFIELD HARDLINE
- BLOODBORNE
- BLADESTORM: NIGHTMARE

## APRIL

- DARK SOULS 2: SCHOLAR OF THE FIRST SIN
- MORTAL KOMBAT X

## JUNE

- BATMAN: ARKHAM KNIGHT



### MO WEMO

Internet of Things pioneer Belkin has announced a new range of sensors for its WeMo system. Later in 2015 we should see a door/window sensor, a motion sensor, a keychain home-or-not sensor and an innovative alarm sensor that alerts you when any non-connected alarm is going off.



### NOT JUST A PRETTY FACE

TV manufacturers are all about the inner beauty these days. Samsung has announced that all of its new smart TVs in 2015 will come with its Tizen OS, as seen in mobile phones and smartwatches. Panasonic, meanwhile, will introduce Firefox OS to some of its TVs this year.



### NVIDIA DROPS A TERAFLUP

The tiny Tegra X1, Nvidia's new mobile chip, has 256 cores and more muscle than the cast of *Gladiators*. Boasting the same Maxwell architecture as Nvidia's gaming graphics cards, it could bring 4K gaming to your next phone/tablet.



### A Bolt of lighting MISFIT BOLT

Smartphone-controlled colour-changing bulbs have been around for ages... and yet still you stall. Why? Is it the money? The Misfit Bolt is available for just R575. While the rival Philips Hue bulbs can be bought for the not-much-more-expensive price of R880, they also require a hub, bringing the overall package price up to about R1050. Is it the lack of a connectable ecosystem? The Bolt will work with Misfit Shine and Flash wearables, and also with the Beddit sleep tracker to wake you, on cue, with a lovely display of sunrise colours. What's that?

You're colourblind? Fair enough, then.

R575 / [misfit.com](http://misfit.com)



DRAW  
THIS...

...WITH  
THIS



### An added dimension 3DOODLER 2.0

The 3Doodler won our hearts back in 2013, and after some furious tinkering it's got even better, as things are wont to do. For starters, this 3D printing pen is much smaller than the original, and lighter at 50g. It's also kitted out in a much more stylish aluminium shell, with tweaked internals, superior cooling and dual-speed control. There's also a new JetPack accessory that bumps the running time up to three hours if you're using the more malleable PLA plastic. In a homage to its original success, it's being launched on Kickstarter.

R1150 (import) / [the3doodler.com](http://the3doodler.com)



# GOPRO ACCESSORIES

You shoot, you whoop and you don't droop: three new action-cam gizmos that have caught our eye



## FINGER ON THE TRIGGER



### Gripix Wi-Fi Trigger Handle

Doesn't it just make your trigger finger itch, seeing a big red one like that? The Wi-Fi Trigger Handle is basically an ergonomic handle for GoPro's own Wi-Fi remote, which nestles inside and pokes its LCD through a little hole. You can stick the actual camera on top, or wherever you like, and other Gripix accessories can be attached in line.

from R1160 (import) / [gogripix.com](http://gogripix.com)

## SIX ROTORS OF FUN

### Hexo+

Two follow-me autonomous drones completed their Kickstarter rounds in the summer: the AirDog and Hexo+. But now that we've had a chance to see both at the CES show in Las Vegas, it's the Hexo+ we're most excited about. It's bigger and more expensive, but it's got six rotors, which should make it more stable, and it's compatible with any GoPro.

R13 300 (import) / [hexoplus.com](http://hexoplus.com)

## CHECK YOUR ANGLES

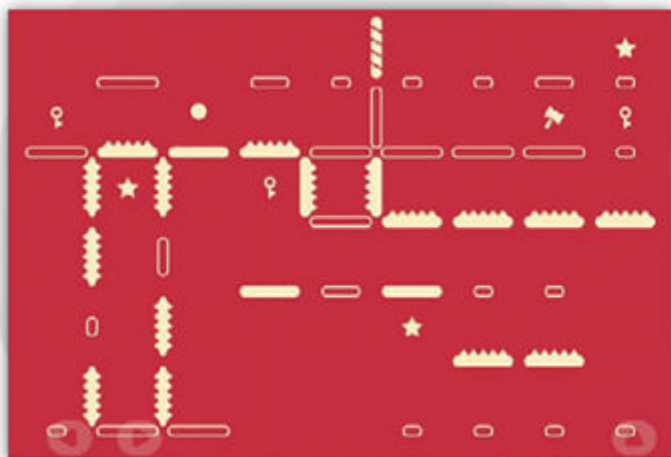


### Removu R1

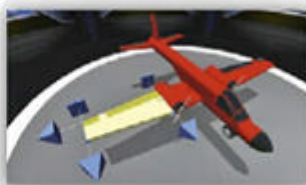
The R1's 2in QVGA screen acts as a handheld or wrist-wearable live view remote, and the company is about to launch a GoPro-standard mount cradle for it too, so you can plonk it in all sorts of useful places. In the meantime, they're crowdfunding P1, a rugged case for GoPro's LCD Touch BacPac screen accessory, meaning you can use that as a viewfinder and remote too.

from R1400 (import) / [removu.com](http://removu.com)

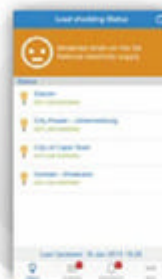
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7



5



8



2



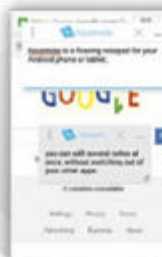
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6



9



### 1 Jump

from Free / Android, iOS

In this simple platformer, you control a ball that bounces in pre-set jumps. Which might not sound much, but once you've been entranced by its hypnotic boinking you'll grow a beard before you remember to stop playing.

### 4 Simple Planes

R60 / Android, iOS

Physics meets fun... and they get on surprisingly well in this sister app to Simple Rockets. Bodge some wings onto the aircraft of your choice, then give it some appropriately over-the-top thrust, then see if it will fly. Crash. Repeat.

### 7 Loadshedding

Free / iOS, SMS

Eskom's at it again and they're not great at communicating when you'll be powerless. So an app will do the trick. Covering Jozi, Durbs and CT and suppliers around SA, it gives status updates, an SMS option and an Android app on the way.

### 2 Star Wars: Knights Of The Old Republic

R58 / Android, iOS

A wedge of *Star Wars* RPG action just slammed down in the Android Play Store. All the fun of the PC version, but now you can play it at work too. Its controls translate surprisingly well to touchscreen.

### 5 VIDI

R150 / Android

It's like Netflix for SA and during power outages, at least you'll be able to watch shows in the dark. All you need to do is pay the sub and you can stream just about anything. Except rentals, those'll set you back around R30 each.

### 8 Jack B Nimble

R27 / iOS

You jump, you whip and you marvel in this retro-hued endless runner. The sound effects and music are suitably atmospheric – there's a touch of *Castlevania* here – and the whole thing is worth the asking price.

### 3 80 Days

Free / Android, iOS

A new, Jules Verne-y adventure from the groovers who brought us the book-game hybrid *Sorcery!* That's their exclamation mark, not ours – though we are excited by *80 Days*, we are not prone to over-egging the punctuation pudding.

### 6 Auxe Beat Studio

Free / iPad

There are quite a few beat-making apps for iPad, but Auxe's one of the best we've seen so far. It's simple, easy to use and well designed, and it's also powerful enough to make your own music and export it to Soundcloud, iTunes and others.

### 9 Hovernote

Free / Android

If you've envied the floaty notes and floaty windows of your friends' Samsungs, you'll be tremendously excited by Hovernote, which gives you floaty-note capability on any Android phone or tablet.

## APP SPOTLIGHT DUET DISPLAY

R185 / iPad

You've got an iPad. You've got a Macbook. You've got a Lightning cable. And you've got R185! You're good to go, on an adventure where you can use your iPad as a second screen for your laptop. According to the devs, the wired connection is 60fps and lag-free – even if you output in Retina display gloriousness. Mind you, those same devs also claim that a second display makes you "up to 48% more productive".



# YOUR MONTH **MAR**

March is the month of movies, mobile, Ministry and mayhem.



**02**

## MOBILE WORLD CONGRESS 2015

Smartphones and tablets and gadgets galore. That's the point of this Barcelona event, which *Stuff* will (as usual) be nose-deep in, ferreting out the best of the announcements, reveals and hands-on opportunities from the press-shotgun that companies all over the world unleash at this time. Expect to see most of this year's lineup about now.



**04**

## MINISTRY SA TOUR 2015

No, this isn't a religious thing but... Old-school goths and industrial fans, rejoice. Unless you can't get tickets for this once-off concert featuring Al Jourgensen and his crew from Ministry. They're unlikely to hit SA ever again but Witchdoctor Productions have managed to get them here this time around and it'd be a shame to miss it.



**06**

## NIGHTCRAWLER

Maybe we're biased but any flick involving the exciting world of journalism is usually the top of our list, mostly because of how inaccurate it is. Even crime journalism in LA, the subject of *Nightcrawler*. Still, that's reason enough to let into this action film that might have you looking at the *Carte Blanche* crew and presenters a little differently.



**13**

## CHAPPIE

A sci-fi film set in South Africa and revolving around a self-aware robot named Chappie, featuring Charlto Copley, those two weirdos from *Die Antwoort* and Wolverine and the lady from *Alien*? Where do we sign up? Being directed by Neil Blomkamp and coming across like a gritty reboot of *Short Circuit* just scores it extra points.



**24**

## GRAND THEFT AUTO V (PC)

Maybe we should stop putting this one here, it seems like every time we do Rockstar goes and delays the PC release of *GTA V*, which tells the tale of Michael, Trevor and Franklin in the big-bad city. And their big, bad crimes, of course. But we can't help but be excited about exploring Los Santos in spiffy 4K.



**28**

## BLOODBORNE (PS4)

The sadists that make up From Software, the studio behind the tough-as-nails *Dark Souls* and *Demon's Souls*, have something new up their sleeves and it's heading to the PS4 only at the end of the month. *Bloodborne* is a gothic adventure involving a disease, death, violence and the feeling that you're going to be wiped out at any moments – and that's just the intro

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# Beautifully Connected

With OneDrive, easily get to your photos and documents wherever you are.



Lumia 930

One Experience. Windows on your phone.

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# WHERE WE'RE GOING WE'LL NEED ROADS

The machine that made the modern world  
is about to remake the future, and this is how:  
five predictions for the car of tomorrow





p50

IT'LL  
STILL BE  
REALLY,  
REALLY  
FAST

YOU'LL  
ONLY  
DRIVE IT  
WHEN YOU  
WANT TO

p40

p46

IT'LL BE  
GESTURE-  
CONTROLLED

p48

IT'LL  
BE A TAXI  
THAT  
THINKS  
FOR  
ITSELF

p44

IT'LL  
RUN ON  
SPARKS  
AND  
SEAWATER



ONE

# YOU'LL ONLY DRIVE IT WHEN YOU WANT TO

Fully self-driving cars are a way off, but 'piloted' driving means you drive the fun stuff, then let the car do the work on the boring bits

## FRICKIN' LASER BEAMS

The Prologue also sports Audi's new laser headlights, which offer twice the visibility when used as high beams.

## HANDLE CAREFULLY

No, they haven't forgotten the door handles: just touch the right spot and invisible sensors will pop the door open.





## AUDI PROLOGUE

**W**hile many concept cars don't have working components or even engines, the Prologue is a real, driveable taste of the luxury two-door A9 that will soon top the Audi range. A 605bhp, 4-litre V8 pushes the Prologue up to 100 in a blistering 3.7 secs, but once you've had your fun with its ferocious power you can press a pair of buttons on the steering wheel and let the onboard AI deal with the motorway traffic.

This is what's known as piloted driving: it's not a fully autonomous Johnny Cab that can tool around entirely without a human — though it can, thanks

to a partnership with LG, be hailed over short distances by a smartwatch. It's a further evolution of technologies that are already available, such as automatic braking and lane detection. Pairing a bonnetful of sensors with a bootload of computing power, the Prologue learns about its surroundings and updates its brain via an always-on cloud connection.

And the techfest doesn't stop there: inside the car there are four bespoke high-res touch displays, which replace all the dials and buttons. There's even a curved touchscreen, used to control media.

### GET THE TECH NOW

#### Cruise

This is the first aftermarket robo-drive kit. With a sensor pod that looks like an aerodynamic Kinect on the roof and a computer in the boot, the Cruise RP-1 will add an autopilot to control your steering and speed in an Audi A4 or S4... but only if you live in California. Still, it's a start. [getcruise.com](http://getcruise.com)



## TESLA AUTOPILOT

As the company that has done more than any other to push car-tech forward in the last few years, it's not surprising that Tesla is champing at the bit to turn its swanky electric cars into swanky self-driving electric cars. Founder Elon Musk announced in October that every new Model S would ship with the sensors and firmware enhancements to effectively drive itself on the motorway. Lane Keep Assist (the car auto-steers to hold its lane) and Speed Assist (the car auto-accelerates and brakes) are now active on every new Model S, and more advanced features, such as the car autonomously coming to meet you at the front door, are to be added as software updates.



### BOOT LOADER

The PC in the Prologue's boot performs 8 billion operations per second while driving, and learns about its surroundings.





## WE RACED AGAINST A ROBOT - AND LOST

**O**n a dreary Wednesday morning at the Ascari racetrack in southern Spain we meet Bobby, one of two driverless Audi RS7s that are, but for some go-faster graphics and a boot computer, standard production cars. Bobby's driving processors are contained in a box that's little bigger than a PS4, and without coaching he doesn't know what to do on the track, so the engineers drive him a few laps to give him a feel for the boundaries, then he's ready to take us for a spin.

Bobby is not slow off the line, cautious on the brakes or timid through the corners. As we race towards the first chicane we pray that he won't do a Windows Vista and bug out right when he should be hitting the brakes. As it turns out, he leaves it far later than we'd have the *cojones* to, then

hammers the brake hard enough for the car to squirm as its not insignificant weight shifts to the front, but with some very quick adjustments to avoid skidding.

Knowing a rain shower was on the way, Audi's engineers dialled the robo-RS7 back a little before we set off, but Bobby is still terrifyingly fast – swinging into corners with no regard for the lunch we've just eaten and accelerating as if jabbed in the backside with a hot poker.

The lap is completely automated – the engineer sitting in the driver's seat holds a kill switch just in case, but it's entirely Bobby's doing. We feel like we've been driven by a human racing driver, one trying hard to scare the tapas out of us. And now we have to try to beat his time.

Inspired by our robotic

rival we try to brake hard and late, but our human safety protocols won't let us take it to quite the same limit. We cross the line, exhausted, in 2mins 22secs – two seconds slower than Bobby. We're no racing driver, but we weren't slow around Ascari. There were others present who did beat the robot, but only just.

Later, an engineer tells us we should try racing Bobby's brother, Ajay. Despite being identical cars with identical hardware, software and mapping, they have different personalities – one drives more aggressively than the other. Spookily, despite a huge amount of expertise, they don't know why.

AI-powered cars should make the road safer but it's also somewhat reassuring to know that they are also capable of speeding.

### 1 SUPER NAV

The RS7's GPS is 100 times more accurate than the one in your car. It can detect deviation from the line by as little as a centimetre.

### 2 FAST COMPUTER

The RS7 has driven with precision at speeds of up to 240km/h, and in 2010 a human-free Audi TTS drove the Pike's Peak challenge.

### 3 SENSOR ADVENTURE

Infrared and ultrasonic sensors, 3D cameras, radar, video cameras and collision detection give the RS7 six senses.





### GET THE TECH NOW

**Project CARS**  
Yes, it is fairly difficult to get hold of a semi-sentient car and a team of skilled engineers for your weekend racing, but you might as well train up just in case. **Project CARS** offers the chance to race AIs on painstakingly realistic tracks and it even supports virtual reality displays. [projectcarsgame.com](http://projectcarsgame.com)



### SPIRIT CHASER

The 'ghost car' is something you're probably familiar with from games, giving you a transparent pace-setter based on your previous laps. A concept design by Jaguar Land Rover brings the ghost car to real roads, via the magic of AR. Using a windscreen that's also a transparent display (like a larger version of the heads-up display found in the BMW i8), a virtual car is made to appear on the road ahead, complete with a 'follow me' sign for faultless navigation. We'd rather use it to improve our lap times, though.

It also makes you wonder what other game tech could be applied to real-world tracks. Could *Forza*'s 'Drivatar' function, which creates a racing AI based on your driving patterns, be used to imprint an A7 with an F1 driver's personality?



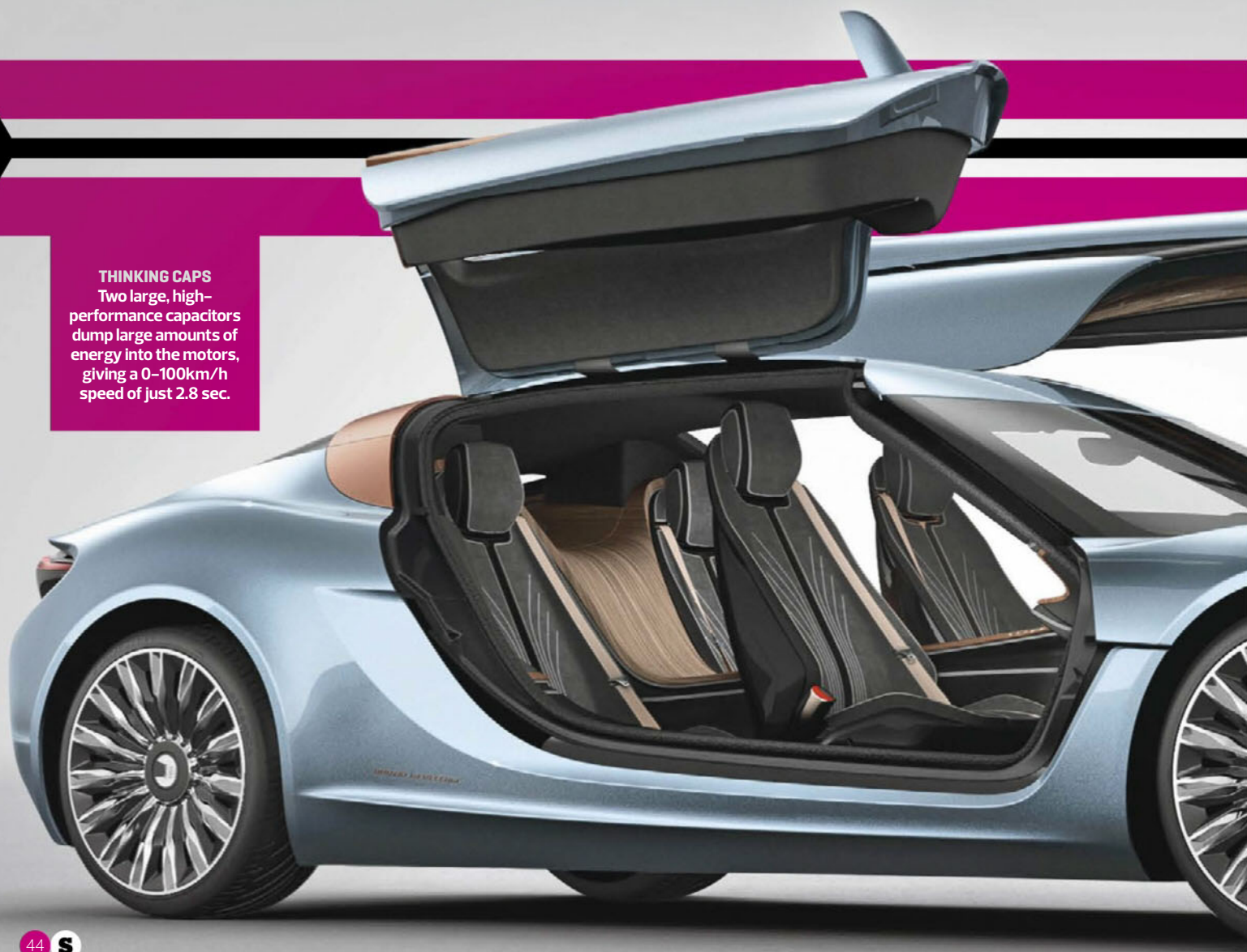
TWO

# IT'LL RUN ON SPARKS AND SEAWATER

As the world realises another 30 years of fossil fuels might not be the greatest idea, new power sources are jostling for a place on the starting grid

## THINKING CAPS

Two large, high-performance capacitors dump large amounts of energy into the motors, giving a 0–100km/h speed of just 2.8 sec.







## NANO FLOW CELL QUANT

**D**on't fill your Fiesta with 'the power of the ocean' – you'll corrode your petrol tank and your carburettor will get blocked by a shad. Only the Quant can draw power from seawater – although 'saltwater' is accurate, as we're guessing they don't go to the beach to power up this gull-winged concept. There's a lot to like about this four-seater, from its curvy wooden interior to its Android navbrain, but the real magic is its battery.

For electric cars to take over, they need range. Tesla is looking to solve this by replacing petrol

stations with its Superchargers, but NanoFlowcell's battery claims a range of up to 600km. The technology for redox flow batteries has been around for a while, but so far no-one has turned it into a viable power source for a car. If the Quant succeeds, it could usher in a new era of electric cars.

Flow batteries are powerful, but unlike lithium-ion batteries, they don't wear out after a few years of being recharged. They are eco-friendly, can be made from cheap materials, and you can fill 'em up like a petrol tank.

### GET THE TECH NOW

**Kraftwerk**  
We've seen fuel cell chargers before, but they rely on bespoke hydrogen fuel cartridges that are expensive or difficult to recharge. The Kickstarted Kraftwerk charger runs on lighter fluid, turning it into a 2W current that will recharge an iPhone 11 times from one filling.

**\$100 /  
hellokraftwerk.com**



## HONDA FCEV

Another alternative to lithium batteries – and one that many more companies are banking on – is the use of fuel cells. The FCEV's small, power-dense cell offers an estimated range of around 480km, but it doesn't need charging like a battery. Instead you refuel it with hydrogen, a process that takes about as long as topping your old dinosaur-burner with petrol. While there are relatively few hydrogen refilling stations, Honda also makes a home energy station that takes your natural gas supply and reforms it into hydrogen, which it then uses to supply your home with heating and power as well as refilling your car's fuel cell – halving your energy bills in the process.



### 1.5-YARD DASH

Inside, the entire dash forms a 1.25m display, running an Android operating system. Great for really, really widescreen films.

### ELECTRO LITE

By pumping out used electrolyte solution and pumping new 'charged' solution in, the Quant can be refilled like a standard car.

## FUTURE POWER

### ROADS THAT CHARGE

With inductively charging toll roads, you'd be able to keep driving while your car powers up. Sounds like sci-fi? In South Korea, there are already a few roads that inductively charge electric buses.



### JET ENGINES

The Jaguar C-X75 concept, announced in 2010, used a pair of diesel-fed jet engines to power its four electric motors, offering huge amounts of energy from a relatively small amount of fuel.



### USING LESS POWER

While it's not likely to take off in the US, some auto-makers are focusing on making smaller, lighter and more aerodynamic cars that just need less energy, like the superb VW XL1.



THREE

# IT'LL BE GESTURE- CONTROLLED

Car designers walk a fine line between keeping us entertained and keeping us safe. The answer is to go hands-free, with a gesture-controlled cockpit



**BASS FOR YOUR ASS**  
The Touch R's seats are fitted with actuators that give the impression of thumping bass without annoying everyone in a mile radius.





## VW GOLF R TOUCH

**F**or a car that's supposed to let you keep your eyes on the road, VW's infotainment showcase offers a lot of pixels to not look at. There's a huge 12.8in/32.5cm main screen for Apple CarPlay or Android Auto, an 8in/20.3cm screen below that for climate control and volume, and the instrument cluster is itself a 12.3in/31.2cm display. What's more, every switch, button and dial has been replaced by proximity-sensing touch surfaces.

The idea is that swipes and gestures are easier, and therefore safer, than buttons and dials. So, rather than fiddle

with a dial to zoom into your GPS map, you swipe two fingers across the multi-touch slider that separates the two central screens. Commands are met by haptic feedback, so you know you've clicked or swiped without taking your eyes off the road.

Better yet, you don't actually need to touch the controls. A 3D camera in the roof recognises hand gestures: waft your hand near the sunroof and it'll open; wave in front of the stereo and it'll fast-forward or rewind. Which is great until a bee gets into the car and you start performing an impromptu DJ set in your attempts to shoo it out.

### GET THE TECH NOW

#### Navdy

If you can't wait to start air-swiping your calls and wafting your maps, there's always Navdy, described by its makers as "like Google Glass, for your car". Like the Garmin HUD it projects information onto a head-up display, with the added bonus of hands-off gesture control.

\$320 (import) / [navdy.com](http://navdy.com)



## NO MORE PLAYLIST PUNCH-UPS

Self-driving cars may eliminate the problem of other people's awful driving, but there's still the problem of other people's awful taste in music. Or perhaps not, if Harman's Individual Sound Zone (ISZ) technology takes off. By combining the vehicle's existing speakers with added headrest speakers and some flat speakers within the car ceiling, ISZ can create a 'halo' of sound around each passenger's head, so you only hear your own playlist and none of whatever ghastly earvomit the Simply Red fan to your left is listening to.

It's not as isolating as headphones, so you can still hear other people's voices to play I Spy and others games.



#### BUZZ SWIPE-GEAR

The 8in/20.3cm touchscreen to control the air-con uses subtle haptic feedback, making it feel like you're pressing a button or a slider.

#### PARK LIFE

VW's new Trained Parking uses a camera to identify a space, move up to it and park, all with minimal input from the driver.

## APPLE CARPLAY OR ANDROID AUTO? BOTH, ACTUALLY...

Your choice of phone has in the past restricted you to certain speakers, accessories and services, but thankfully it doesn't look as if it'll make any difference to your motor. At CES VW, Audi, Parrot, Kenwood and Pioneer all announced car tech that supports both CarPlay and Android Auto. Pick of the crop for us was Parrot's RNB6, a 7in/17.7cm HD head unit running Android Lollipop (but supporting CarPlay), that works with front and rear cameras, parking sensors and vehicle diagnostics to provide a seriously geeky ride, even before you start playing with the sophisticated audio tuning, Shotgun!



FOUR

# IT'LL BE A TAXI THAT THINKS FOR ITSELF

When all cars drive themselves and algorithms can predict when and where you'll need an autonomous cab, cars will become like hotels: a service, not owned, but hired

AFTER YOU  
LED displays, a laser  
projector, sounds and  
speech allow the Merc  
to communicate with  
pedestrians and  
other drivers.







## MERCEDES F 015

If the car of the future really is an artificially intelligent Uber, there are bound to be different levels of service. At the bottom will be robotic Dacia Sanderos that make stopoffs for Amazon deliveries. At the top, there'll be this reflective scoop of luxury.

The F 015 is basically a small first-class lounge on wheels. The seats face each other, as those rich enough to sit inside wouldn't dream of doing anything so servile as driving, but passengers can still act as backseat drivers, instructing the car via huge touchscreens.

The benefits aren't just for those inside, though: if it spots

a pedestrian at the edge of the road, the F 015 will halt and project a pedestrian crossing, like Sir Francis Drake laying his cape across a puddle.

While the engine – a hybrid electric powertrain with a fuel cell for longer journeys and batteries for around town – and the self-driving tech are clever, the most forward-thinking thing about this car is how Mercedes says it will be used. It's a 'mobile living space' rather than a means of transport: somewhere to watch films and have meetings and sleep while, incidentally, also going somewhere.

### GET THE TECH NOW

You'll have to move to the UK for this but on-road tests are expanding. Milton Keynes, Briston, Greenwich and Coventry are testing dinky little driverless cars in 2015. Dinky may not be sexy but members of the public will be able to make use of them. Still, you have to go to Milton Keynes to do so.



## THE GOOG-MOBILE

When the Giant King of the Internet builds a self-driving car, it's natural to have high expectations, and it's equally natural to be bemused when the motor in question turns up looking like the plastic wobblemobile you trundled around the playground in as a toddler. But Google's prototype takes vehicular autonomy to its full extent: the only human control is a button, and given Google's expertise in voice recognition, it's unlikely that even this will remain in later versions. Its cutesy grin belies the formidable tech lurking beneath: on top of GPS and camera positioning, 64 lasers scan the surroundings in 360°. Unsurprisingly, auto companies are quietly battling to get Google's tech into their machines.



### LOUNGE LIZARD

The interior is described as a 'luxury lounge', with walnut flooring, nappa leather seats and a nice little table for your glass of Riesling.

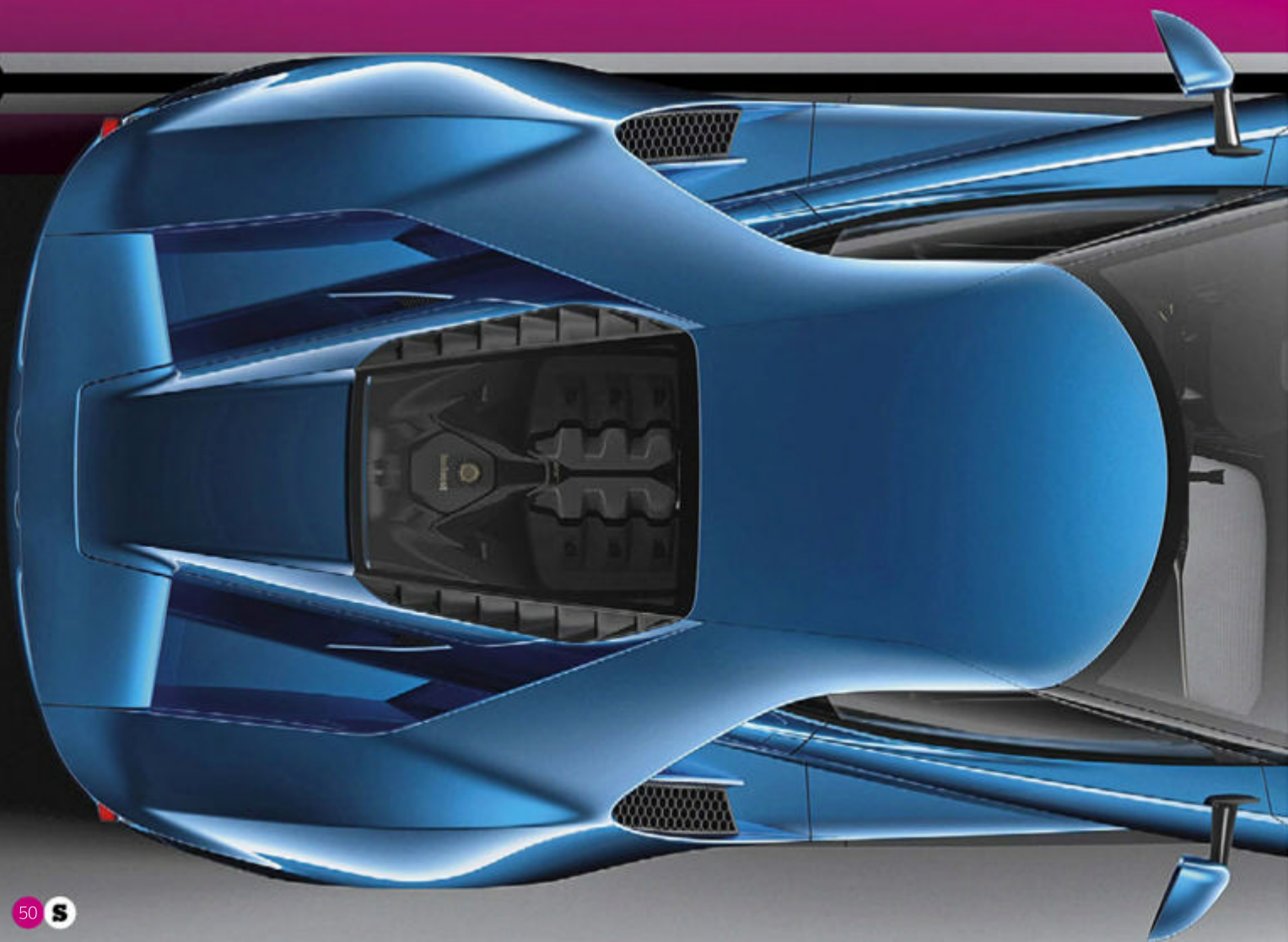
### SCREEN IF YOU WANT TO GO FASTER

Gestures and touch controls on the six large interior displays allow you to navigate and select driving styles.

FIVE

# IT'LL STILL BE REALLY, REALLY FAST

As motorways become automatic and cities become no-drive zones, the car of the future will live on the racetrack and the winding country road







## FORD GT

**Y**ou wouldn't think a 600bhp supercar would allow the word 'eco' within 90 meters of the scoops and blades of its carbon fibre bodywork, but the new GT's engine is a big, bad, bodybuilder brother to the EcoBoost engines found in today's Fiestas. Of course, if you were to try to put the GT's 3.5-litre V6 in a small car it would probably punch its way out and stomp off on its muscular pistons in search of a polar bear to eat, but that's what cars like this are about.

When all the boring driving is done by computers and every journey from A to B is done

under clean, green power, there will still be cars that want to go from A back to A, repeatedly, very quickly indeed.

The GT is both a pedigree hound and a mechanical wolf from the future. It's a clear descendant of the original GT40, which was designed and built in Britain and dominated Le Mans in the 1960s, but it's also festooned with tech, including a body that's mostly carbon fibre and a rear wing that actively angles and positions itself for aerodynamic effect. And, like previous GTs, it promises to leave a trail of frustrated Ferraris behind it.

### GET THE TECH NOW

#### Dash

You might not have the team of experts and the giant pool of money required to run a proper racing outfit, but you can improve both your driving and your car's performance using the Dash plug-in module and app, which give advanced feedback on both your car's vital signs and the amount of fuel you're using.

**£10 (import) / dash.by**



## HONDA NSX

Unveiled (as the Acura NSX, its name in the US) on the same day as the Ford GT, Honda's new supercar is, like the GT, the son of a superstar. The original NSX had some help, to be fair — Honda enlisted Ayrton Senna for final testing and design tweaks — but the long-awaited new NSX promises to uphold the family name.

It's a hybrid, but not in the Prius sense: like the BMW i8, it has front wheels driven by a pair of electric motors, but there's also a third motor that fills in the gap between takeoff and the huge whump of power delivered by the twin-turbocharged V6. Honda says it'll be even quicker off the mark than crazy-acceleration, all-electric cars like the Tesla Model S. Phew.



#### FAST

Ford hasn't published what its new baby can do yet, but expect a 0-100 of around three seconds and a top speed of over 320km/h.

#### LIGHT

Because the chassis itself is made with carbon fibre, the GT will rival the McLaren P1 and Ferrari 458 for power-to-weight.

#### OUTTA SIGHT

It'll be late 2016 before the first of the new GTs rolls onto public roads, at an estimated price of around R4.4 million. Better start saving.

## FASTER STILL

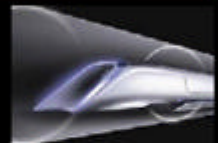
### FLYING CARS

The ultimate answer to your traffic woes is to rise above it and hoon along in a straight line at 240km/h. It's still early days, and the Aeromobil 3.0 is more of a drivable plane than a flying car, but the dream of a 3D commute remains strong.



### HYPERLOOP

Why go in a straight line at 240km/h when you can go in a straight line at 1225km/h? This insanely fast vacuum tubeway, currently being considered by Tesla mechwizard Elon Musk, is like air travel without the pesky up-down bit.



### OR YOU COULD JUST STRAP YOURSELF TO A JET ENGINE

That's the basic premise of Bloodhound SSC, a 'car' being developed in Bristol to break the 1610km/h barrier. With 135 000bhp and wheels of solid aluminium, it's a nippy little runner.



# Dash of the iTunes

Stuff takes Apple's new iPhone-powered in-car tech for a spin, courtesy of Pioneer's new touchscreen stereo, the snazzy SPH-DA120

R10 000 / importital.co.za



Plug in your iPhone and CarPlay flashes up your compatible apps on its display

## DAY 01

We've been seriously excited about CarPlay for ages now. We've been lucky enough to drive some fancy new cars this year – including the likes of the Jaguar F-Type and Audi R8 – and while none of the in-car tech is what you'd call poor, none get anywhere near the sort of slick, intuitive, smart experience we all get from our smartphone every day.

CarPlay promises exactly that – to transfer the iPhone

experience directly to your car's touchscreen – so when Pioneer asked if we wanted to test out its new CarPlay-running SPH-DA120 head unit we weren't about to turn down the opportunity.

We've looked into changing the stereo in our cars a bunch of times and have been put off by the apparent fiddliness of the job, so we were properly impressed and relieved when we picked the car up and found the

whole thing had been sorted with no apparent issues.

The distinctly old-fashioned slot-loading CD drive and big-buttoned radio have been replaced by a flashy 6in/15.2cm touchscreen, and we're mighty chuffed from the off. Turn it on and Pioneer's own interface pops up first, but plug an iOS 8 iPhone into the Lightning connector (which in our case has been conveniently routed to a little cubbyhole by our left elbow) and CarPlay bursts into life.

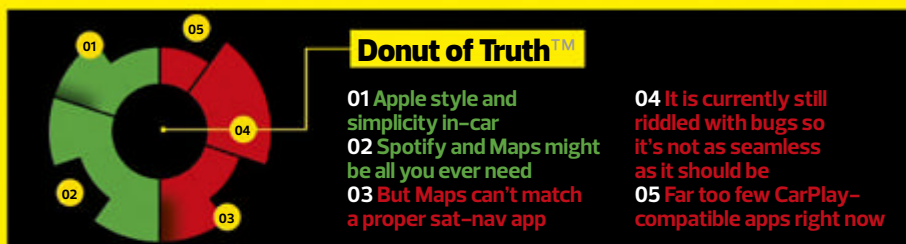
If you're expecting typical Apple simplicity, you get it: apps are presented eight to a screen,

with big, easily proddable icons. If you're expecting the typical Apple app selection, you're going to be disappointed. Only eight of our iPhone's bajillion apps have a CarPlay mode: Maps, Music, Podcasts, Phone, Messages, Spotify, Radio and Stitcher.

In fairness, having an app for music and one for navigation is the real priority while on the road and those bases are covered, but how well? We have to admit, the short journey home from the garage suggested Apple Maps might have turned a corner (sorry) – but this was going to need longer testing.

**Even fancy in-car tech gets nowhere near the sort of slick experience we all get from our smartphone every day**





## Tech

**Phone compatibility**  
iPhone 5, 5c, 5s, 6, 6 Plus  
**Head unit tested**  
Pioneer SPH-DA120  
**Fitting**  
Double DIN  
**Display**  
6.2in/15.7cm  
WVGA multi-touch  
**Amp power**  
4x50W  
**Other functions**  
AppRadio, MirrorLink, HDMI, aux-in



### DAY 04

We were wrong about Apple Maps. Yes, it's much better than it was and it will get you where you want to go with very clear voice instructions, but compared to a good dedicated sat-nav app it falls way short. It has traffic data, appearing as little red and yellow areas of snarlage, but once you're rolling there are no warnings and there's no apparent traffic avoidance. So today, despite our better judgement (and the pleading of our TomTom), we followed Apple Maps onto the N1. On a Friday. During rush hour.

### DAY 06

Having Siri as your in-car butler should be awesome, but he's regularly mishearing things and often not available due to loss of data signal. Without an internet connection, he can't even place a call to one of your phone contacts.

### DAY 07

The CarPlay podcast app has come at just the right time: the peak of our addiction to *Serial*. We're almost hoping for traffic so we can listen to more before arriving at *Stuff Towers*. A hidden benefit of Apple Maps' shortcomings, perhaps?

### DAY 10

The system crashes every couple of days, and there's a Spotify issue whereby it refuses to play the selected track and instead spurts out whatever it fancies from your iPhone's storage. The only fix seems to be to start the track on your phone instead: a no-no while driving. For now we make sure it's playing before we set off, but it's clear there are a fair few faults left.

### DAY 12

Having Spotify built into the car is great. The landscape layout of the Pioneer touchscreen means a lot of swiping to get through a long playlist, and you're limited to saved playlists and Spotify specials, but it does sound a whole lot better than our old stereo, even through the same speakers.

### DAY 14

We've seen nothing to alter our view that Apple CarPlay (and rival Android Auto) is the future of in-car entertainment, but that future hasn't arrived yet. It feels unfinished, with too many bugs and too few apps. We're glad we've had it installed and excited to see it improve, but we wouldn't advise on taking the plunge just yet.

## STUFF SAYS

**CarPlay will probably turn out great, but right now it feels as if it's still parked firmly in beta**

★★★★☆

# App:roved

FOR  
HEALTH  
POINTS

## ● Earthmiles

Endorphins and a non-embarrassing waist size are good rewards for exercising, but what if you want a monetary incentive too? Enter Earthmiles. It connects to fitness trackers such as Strava, converts your workouts into points, then gives you a list of health-conscious places to redeem them. It's a great idea, but our 'rewards' weren't any better than sweat-free offers from Groupon. If they sign up some better partners, it could be a winner.

**Stuff says** ★★★★★  
Free / iOS, Android

FOR  
LAZINESS  
GUILT

## ● Google Fit

As the big G's rival to Apple's Health Kit, this app aims to track all your fitness-related activities on your Android. It does a pretty good job, although testing this over Christmas led to some pretty sad stats, with a Boxing Day low of 6mins of movement. It also tallies all your workouts from your other apps and fitness trackers, so isn't dependent on you carrying your phone everywhere (try it, you might like it) – but it doesn't always interpret the data properly.

**Stuff says** ★★★★★  
Free / Android

FOR  
YOUR BRAIN  
CELLS

## ● Peak: Brain Training

Brain training is far from new, but Peak does it better than any other app we've used. It's all in the simple genius of its quickfire games, the clean, colourful graphics, and the personalised training programme that's designed to make you sharper and more focused. Whether it will regrow all those brain cells we've brutally murdered over the years remains to be seen, but we've subscribed for the bonus content to give it a good shot. Miracles can happen, right?

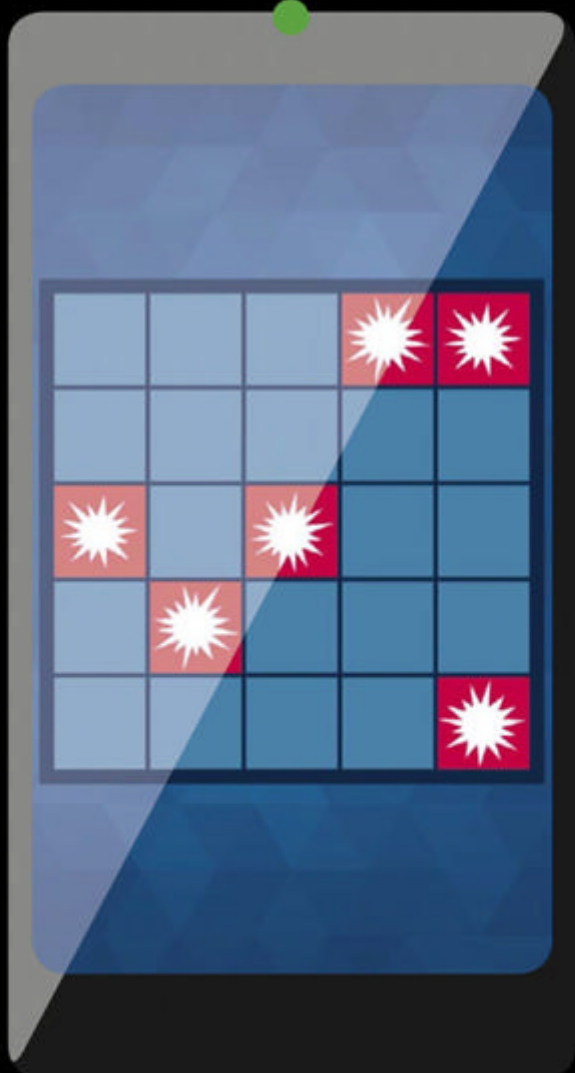
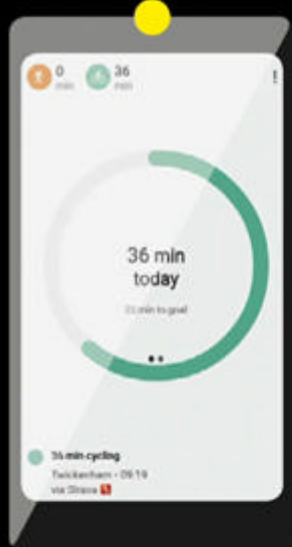
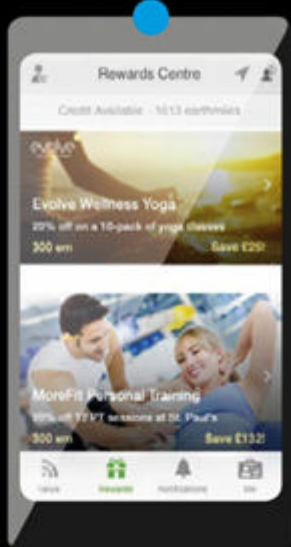
**Stuff says** ★★★★★  
Free (in-app purchases) / iOS

FOR  
LIFE  
HACKS

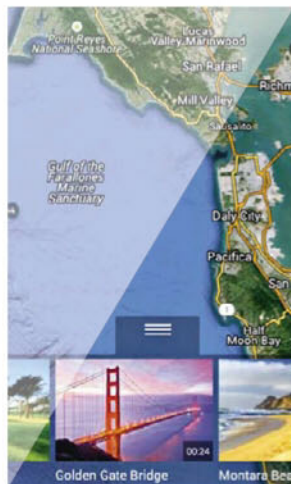
## ● Workflow

This allows you to create 'apps' that set in motion sequences of activities. Make a homescreen icon that prepares an email template with your daily to-do list. Or have one that auto-crops photos as they're taken. Or you could save an idea straight to Evernote. Or find out where the nearest coffee shop is, what it looks like and how to get there (that's one of the pre-prepared Workflows). The learning curve is steep but it's a useful, powerful tool that's fun to play with.

**Stuff says** ★★★★★  
R35 / iOS







### ● Google Earth

Not sure where to explore next? Swipe your way around a zoomable world, like a digital Superman, and then zero in on a place to visit. (Or just use the search field, like a normal person.) Overhead views of landmarks, Wikipedia entries, tons of photos, and links to nearby sites of interest are then all yours for the taking.

**Stuff says** ★★★★★  
Free / Android, iOS

# Mini meme



# TOUCH-SCREEN TOURIST

Why bother with expensive plane tickets and hotels when you can see the world on your phone or tablet? Here's *Stuff's* guide to sightseeing from an armchair



### ● Google Maps

Google Maps isn't just about directions – increasingly, it's about discovery (and not in the sense of snooping about the nice bits of town). It now moves beyond the road, enabling you to wander around Gombi National Park, visit the Pyramids and navigate the Colorado River. Google 'Street View Treks' for more sites.

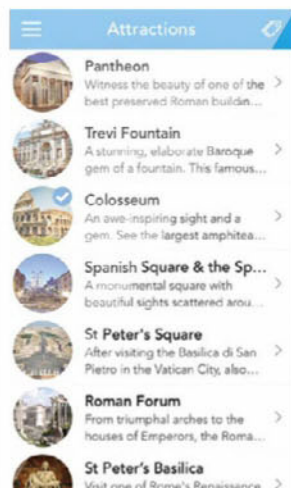
**Stuff says** ★★★★★  
Free / Android, iOS



### ● Bonjournal

This one describes itself as a simple travel journal app. Install and sign up and you'll then be faced with a blank page, screaming MY FIRST JOURNAL. Don't worry, you don't have to write anything – just tap the 'people' icon, select 'featured' and do some touchscreen tourism vicariously through other people's tales.

**Stuff says** ★★★★★  
Free / Android, iOS



### ● Tripomatic

In Tripomatic you select a destination, whereupon you're presented with lists of activities and attractions. For each, you get imagery and insights (although Android users are a bit short-changed on the former). You can also build an itinerary if, you know, you're actually thinking about leaving the house.

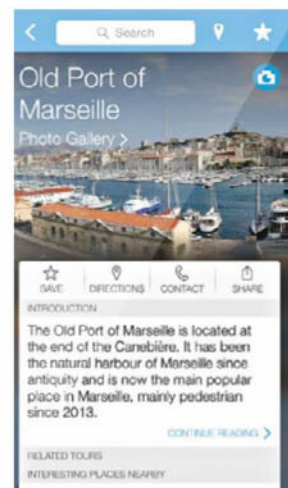
**Stuff says** ★★★★★  
Free / Android, iOS, BlackBerry



### ● Storehouse

Storehouse is similar to Bonjournal, but it's not just about travel (although perhaps 'Building a Turducken' is a journey of a kind). Select 'Places to go' and you'll gain access to beautifully illustrated stories of exploration and adventure, full of gorgeous photography and video that goes full-screen with a tap.

**Stuff says** ★★★★★  
Free / iOS



### ● Triposo

It's another app intended to build a travel itinerary, but Triposo's really cool feature is its city walks. Choose a location, whether that be Paris or Buenos Aires, decide on a distance and you'll be given a route and sights to see along the way, each of which can be explored further with a tap. Virtual walks for virtual tourists! Genius!

**Stuff says** ★★★★★  
Free / Android, iOS

# Watch the thirdie

Sony's attempt no.3 at an Android Wear timepiece has wrapped itself around our wrists – but is it the best one yet?

■ Its design won't get your heart racing as the shiny circular body of the Moto 360 might, but the SmartWatch 3 isn't ugly – just plain and inoffensive. The adjustable strap is comfortable and the metal clasp is sturdy. Sadly, you can't use standard watch straps with it – you're stuck with Sony's.

■ The SmartWatch 3's biggest disappointment is its screen. While it's as sharp as its other Android Wear rivals, it can't hold a candle to the deep blacks of the LG G Watch R, and colours appear washed out, with yellowish whites.

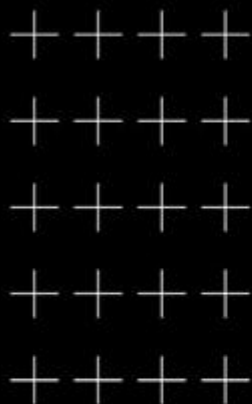
■ There's no lack of power, though. The 1.2GHz quad-core processor runs the latest version of Android Wear without any lag or stutter. Speaking of which...

■ Android Wear 5.0.1 Lollipop brings a host of useful tweaks and features including funky third-party watch faces, and a Theatre Mode for killing off the screen in distracting situations.

■ With the screen set to Always On, the SmartWatch 3 matches the G Watch R's 1.5-day battery life, which is a decent innings for existing Google watches. Its microUSB charging port is a double-edged sword, however. Cables are fiddly and inelegant compared to a charging dock.

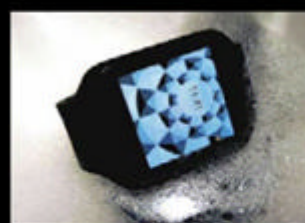
## Tech specs

**Screen** 1.6in/4cm 320x320 TFT LCD  
**Processor** 1.2GHz quad-core ARM A7  
**Connectivity** Bluetooth 4.0, GPS, NFC  
**RAM** 512MB **OS** Android Wear 5.0.1 **Battery** 420mAh **Storage** 4GB  
**Dimensions** 36x10x51mm **Weight** 38g (Classic), 35.7g (Sport)  
**Price** £3000 / [sony-africa.com](http://sony-africa.com)



## Run for your money

This is the first Android Wear device with built-in GPS, which means no more lugging your phone on runs to track your route. It works with major apps such as RunKeeper, with more support to follow.



## Dust it off

The SmartWatch 3's rubber strap is a powerful dust magnet. Luckily it's IP68-rated against dust and water, so you can rinse it off under the tap without having to worry about its insides drowning.

**STUFF SAYS** The fittest Android Wear watch around. Shame about the display ★★★★★☆

## The perfect fitness smartwatch? Almost...

While most people prefer the circular styling of its LG and Motorola rivals, fitness fans should be extremely tempted by the SmartWatch 3's built-in GPS. Going for a run, tracking your route and streaming music to Bluetooth headphones – all with your phablet left at home – is liberating. It's a shame there's no heart-rate sensor. For that your best bet is something like the TomTom Multi-Sport or Garmin Forerunner 920XT.





Innovation  
that excites



## NEW NISSAN JUKE. TESTED TO THRILL

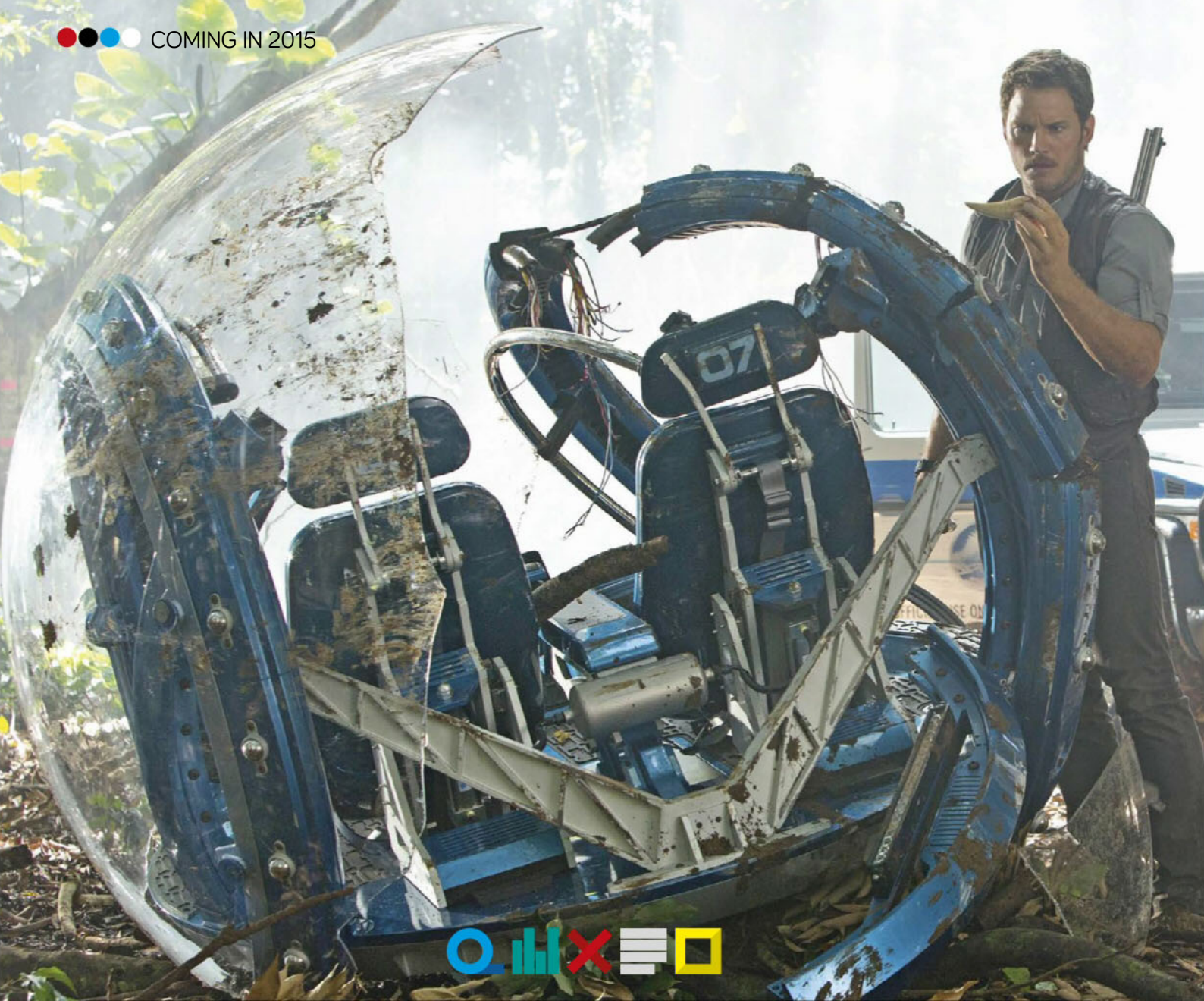
You feel the hair on the back of your neck begin to stand. Your eyes sharpen as your pupils dilate. Your heart begins to race. You're in the new, bold Nissan Juke. Your online world travels with you, thanks to NissanConnect, and the confident, responsive range of engines lets you know that this isn't just a drive; it's a thrill.

Available in 1.2 Turbo, 1.5dCi and 1.6 DIG-T engines.

[nissan.co.za](http://nissan.co.za)



COMING IN 2015

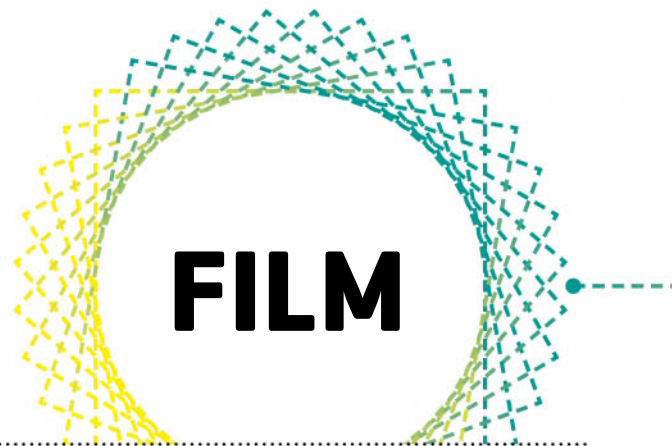


ON SCREEN IN

2015

Now that you've finished breaking your New Year's resolutions, kick back and get stuck into the mountainous new crop of things to watch and play. Here is *Stuff's* pick of the coming year's tastiest eye-fodder...





# FILM



**Spirit of Bond**



**Looking for input**

## Q Spectre

Aside from its title and cast (including the new Aston Martin DB10), little is known of the 24th Bond film. Daniel Craig returns as 007, as does *Skyfall*'s Sam Mendes in the director's chair, while Christoph Waltz is rumoured to be bringing back Blofeld rather than a character called Oberhauser as is listed on the official documents. Bond always has been rather fond of a codename or two.

## Q Chappie

He might look and sound like Johnny 5's South African pen-pal but there's more to Chappie than '80s nostalgia. The pointy-eared humanoid is brought to life by a scientist and begins to learn about the world around him, but if director Neill Blomkamp's previous films are anything to go by, he's fairly unlikely to spend the film flower arranging and helping old ladies across the road.



**Will I be back?**



**Netflix does cinema**

## Q Saved from extinction

### Q Jurassic World

Because the *Jurassic Park* franchise has already used up all the largest, most dangerous dinosaurs Nature could produce, this monster reboot features a hybrid dinosaur cooked up in a lab by scientists who obviously haven't seen any films about creating hybrid monsters. We can't wait for their next big idea, which is obviously robot dinosaurs. In space.



### Q Terminator Genisys

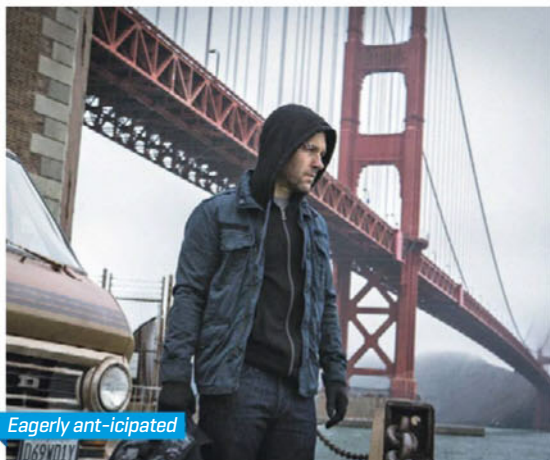
The title looks like a typo and the trailer's full of slightly cringeworthy lines delivered by a man who now looks more like he's been spliced with a tan leather sofa than a metal robo-skeleton, but *Genisys* could be the film that, rather fittingly, saves the *Terminator* franchise from extinction. If it doesn't succeed, we'll have to send someone back to wipe out anything after T2.

### Q Crouching Tiger, Hidden Dragon: The Green Legend

It's not just TV shows that Netflix is making – *The Green Legend* is an own-brand sequel to Ang Lee's quadruple Oscar-winner that'll launch simultaneously on Netflix and in IMAX cinemas. The martial arts bits are being choreographed by the guy who did both *Kill Bill* films, so you can expect more beautifully shot, balletic beat-'em-up action.



# FILM



Eagerly ant-icipated

## Q Ant-Man

Edgar Wright might have suffered cold feet and abandoned ship but *Ant-Man* has continued his six-legged march to the big screen. Paul Rudd plays the man who can shrink in size but multiply in strength, a power bestowed on him by the original Ant-Man, Dr Hank Pym (played by Michael Douglas). Let's hope nobody pours boiling water down his chimney.



A post-Pixar future

## Q Tomorrowland

Having cut his teeth in animation for Pixar, Brad Bird's first live-action movie was the cartoonish *Mission Impossible: Ghost Protocol*. His next is almost a combination of the two: a sci-fi film inspired by a Jules Verne-type alternative future area at Disney's theme parks. George Clooney and Hugh Laurie star in a land "where nothing is impossible".



Not so forced

## Q Star Wars Episode VII: The Force Awakens

Yes, we know the last three were worse than being stuck in a lift with Jar Jar Binks but, crucially, director JJ Abrams' trailer displays the restraint that George Lucas had lost when it came to the prequels, hitting every touchpoint – X-Wings, Stormtroopers, lightsabers, annoying droid – that a fan could ask for. And there's not a trade dispute in sight.



Snares and swears

## Q Whiplash

If you're going out to see *Whiplash*, sit right in the middle, about two thirds of the way back. That's where the sound is best, and – this being a film about drumming – the sound is as important as what's on screen. Do keep your eyes open though, or you'll miss an astonishing performance from JK Simmons as the world's most intimidating music teacher.

## TECH



### Dolby Atmos

It was launched last year but 2015 should be when Dolby's noise-bouncing tech comes to better films than *Transformers: Age of Extinction*. It uses upward-firing speakers to ricochet sound off your ceiling, giving the impression that it's coming from above. And you know what? It only bloody works. Pioneer, KEF and Onkyo are on board with more sure to follow, plus an Atmos-enabled Blu-ray of *Gravity* should be out now. Go on, treat yourself to an Atmos-pheric spacewalk.

INCOMING

Jurassic World Batman: Arkham Knight Mad Men The Avengers: Age Of Ultron



# TV



**Breaking the Bar**



**Lynch mob**

## ■ Better Call Saul

*Breaking Bad's* 10-episode spin-off hits Netflix in February. Set six years before Walter White's meth antics began, when his nefarious lawyer was still going by the name Jimmy McGill, *Better Call Saul* follows Jimmy's transition to Saul Goodman – a lawyer who'll do almost anything to stay out of court. The big question is: will Walter White pop up in the background buying biscuits?



**Frosty reception**



**Poker face**

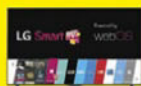
## ■ Fortitude

Sky Atlantic's *Fargo*-esque new series takes place in an Arctic town where violent crime is about as common as sunbathing and ice cream. So when somebody is murdered a detective flies in from outside to help the local police chief investigate and try to prevent the town descending into chaos. Worth watching for the incredible snowbound scenery almost as much as the story itself.

## ■ House Of Cards

Fresh from his appearance in *Call Of Duty: Advanced Warfare*, Kevin Spacey heads back to the White House for a third term as Frank Underwood in *House Of Cards*. A 12-second teaser for the Emmy-winning show sees Frank and his wife boarding Air Force One. Is this the start of the Underwoods' plan to scheme their way to world domination? We'll know all on 27 February.

## TECH



**Tizen TV**  
With the remains of Palm's WebOS powering LG's smart TVs (and doing an excellent job of it) you can expect other TV makers to look to mobile interfaces for inspiration too. Samsung has long been a fan of its own Tizen OS, with persistent rumours that it'll drop Android in favour of it, but one thing we know for sure is that there'll be a Tizen-powered TV unveiled at CES. Samsung is saying there will be no big surprises, though, so don't be too disappointed if there isn't a whole Tizen-toting range.



## Family misfortunes

### ■ Bloodline

Another new Netflix original series to binge-watch in a weekend and then question what you're doing with your life, *Bloodline* is from the same trio who created *Damages*. It centres on a family of four siblings in the Florida Keys who are forced to face up to some home truths when their estranged brother returns.

**Terminator Genisys The Biography Of The Modern Bike Inside Out The Man From UNCLE**



# GAMES

## TECH



### Oculus Rift

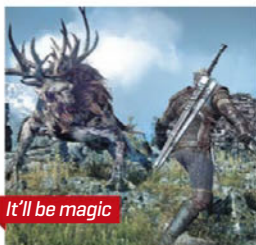
While we're hoping to see a finished Rift virtual reality headset this year, Oculus's recent acquisition of a company called Nimble VR might suggest that what we've seen so far is only part of the planned package. Nimble's Sense camera uses a depth sensor to precisely track the position and movement of the wearer's hands, and even individual fingers. It then uses this data to bring the hands into the virtual world. But why stop there? A full-body VR experience is surely on its way...



Pop-in Locke

### ✕ Halo 5: Guardians

With its multiplayer beta happening right now (see our hands-on preview) *Halo*'s first proper Xbox One outing is well and truly on the horizon. While Master Chief is still the main Spartan, *Guardians* will introduce a new character called Agent Locke alongside him, although whether you'll play as both is still a mystery. If the beta is anything to go by, it'll be everything *Halo* fans could wish for.



It'll be magic

### ✕ The Witcher 3: Wild Hunt

It might have been delayed until June but that hasn't dampened our excitement for *The Witcher 3*. The delay is due to the team underestimating the size and complexity of the game, but if it means the horse-riding, sword-toting, beast-slaying, spell-casting action is everything we hoped it would be, we can handle having to wait a few more months to dive in.



Going boldly...

### ✕ No Man's Sky

We've seen plenty of its procedurally generated universe, but much of what you actually do in *No Man's Sky* is still unknown. You start off at the edge of a galaxy but where you go from there is up to you. But for Hello Games to give too much away goes against the whole exploratory ethos of *NMS*. We may not know everything about it, but that's exactly how it should be.



Eject-o-Batz

### ✕ Batman: Arkham Knight

While his silver screen incarnation prepares to take on Superman in 2016, The Dark Knight has another game to make in the meantime – and it seems the Batmobile is going to play a big part. Gameplay videos show the tank-like runaround being used to pull down doors, pepper baddies with bullets and launch Batman high into the air from some sort of ejector seat.



Cardboard cover

### ✕ Metal Gear Solid V: The Phantom Pain

Hideo Kojima turns the weirdness right up in *MGS V*, with horses attached to weather balloons, cardboard box disguises with pictures of Playboy models pasted on the side and a wolf in an eyepatch. It'll also see the return of Metal Gear Online, the game's multiplayer mode, complete with stuffed toys to distract other players. Yep, the weirdness has crept in here too.



Monster mania

### ✕ Evolve

Taking the four-person co-op route of its maker's previous game *Left 4 Dead*, *Evolve* pits your quartet against a single, human-controlled monster rather than whole swarms of brain-hungry zombies – essentially it's one big boss battle. The beast can power up by eating wildlife, while its main goal is to take out the generator before the foursome team up to take it down first.



A new way to knock

### ✕ Rainbow Six Siege

Tom Clancy's new five-against-five multiplayer shooter puts you at the centre of a hostage situation – either trying to rescue one, or doing everything you can to stop that happening by fortifying walls and setting traps. That won't stop the attackers blowing holes in the walls and floors, which looks like the most fun you can have with a breaching charge this side of 2016.



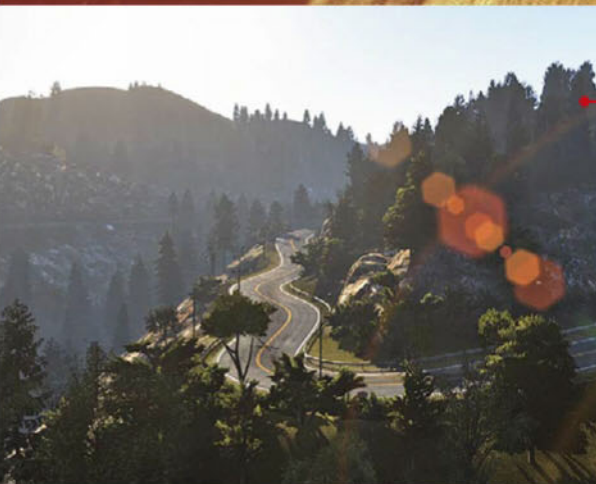
Grappling with family

### ✕ Uncharted 4

The male Lara Croft jets off to some far-flung corner of the world again, but this time he's had his pixels polished, learned to use a grappling hook and brushed up on his fisticuffs. The first gameplay video shows Drake scrambling across sheer rock faces and through flooded caves, and tangling with nefarious henchmen on his way to a rendezvous with a special guest: his brother.

**Spectre** **Halo 5: Guardians** **Star Wars Episode VII: The Force Awakens** **The Martian**





#### Laying down rubber

#### ✕ Project Cars

Having out-braked itself and missed the apex of its release date, *Project Cars* will make it to the starting grid a little later than planned, but its huge range of vehicle types, familiar circuits and petrolhead-friendly difficulty curve mean there's plenty more than just lots of nice-looking cars to get excited about here. It'll even let you drive around in go-karts.





# 12 Cylinders, endless fun

The newest star in the Mercedes-Benz S-range combines the latest in motoring tech with head-turning styling and an eye-watering price.

Performance, comfort, striking aesthetics and high-end tech all come standard with the new S 65 AMG Coupé, the top-of-the-range model in the S-Class Coupé series. With its aggressive lines and guttural growl, this isn't a car for the faint-hearted.

This is a car that, as a friend put it, "looks like it goes forward rather quickly". Put your foot down and it roars to 100km/h in just over four seconds, pinning you to the nappa leather upholstery in the process. Mercedes's Magic Body Control and Road Surface scanning via a stereo camera behind the windscreen means the suspension reacts to the road surface and curvature and the car tilts into corners, providing improved traction, control and comfort.

Technology abounds, with a heads-up display that projects pertinent information – like just how much you're exceeding the speed limit by, or navigation directions – directly onto the windscreen, to an electronic tinting panoramic roof, hot-stone massage seats, a 31.2cm high-res colour TFT display in the dashboard (that offers night vision mode), 360° cameras and Active Parking Assist.

Then there's the three transmission modes, Controlled Efficiency (C), Sport (S) and Manual (M), each of which changes the suspension and angle of the flaps on the twin exhausts. In the unlikely event you tire of the V12 roar there's also a Burmester high-end 3D surround sound system.

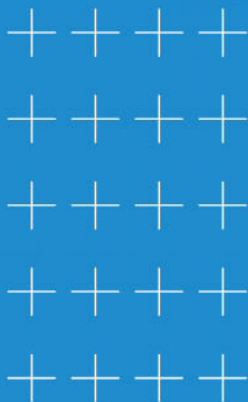
## Tech specs

**Engine** 6.0-litre twin-turbocharged V12 **0–100km/h** 4.1sec **Top speed** 250km/h (electronically limited)

**Fuel economy** 11.9l/100km

**Emissions** 279g/km **Weight**

2585kg **Price** from R3.1million



## Bling thing

In case its mix of convex and concave panelling wasn't arresting enough, each headlight contains 47 Swarovski crystals, 17 on each side for the daytime running lights and another 30 in each indicator.



## Smells expensive

Mercede's Air Balance perfume circulation system, which features a bottle of custom scent slotted into a dedicated portion of the glove box, ensures the S 65 AMG always smells showroom fresh.

**STUFF SAYS** A head-turning, tarmac-devouring, engineering marvel ★★★★★

**It's not a car;  
it's a lifestyle**  
*Craig Wilson*



The S 65 AMG has every feature you'd expect from a modern coupé and then some. Though it's as comfortable as you could wish for in traffic, every touch of the accelerator reminds you that it's at its best on the open road or the racetrack. If you do get one, expect strangers to stop you to talk about it and your friends to hate you – but that's a small price to pay for this much unadulterated fun.





# ***The case for Serial***

*(and the podcast  
renaissance)*

**Podcasts have been quietly growing for years, but one show has turned them into a true cultural phenomenon. Stuff investigates the huge success of Serial**



If 2011 belonged to Ned Stark in *Game Of Thrones*, 2012 was all about Lena Dunham's quartet of *Girls*, and 2013 was dominated by *Breaking Bad*'s meth-cooker extraordinaire Walter White, 2014 was the year of Hae Min Lee, Adnan Syed and Sarah Koenig. That's because the year's must-watch TV show wasn't on DStv or Netflix. It wasn't even a TV show — it was a 12-part podcast called *Serial*.

*Serial* is a re-investigation of a real-life murder case that unfolded in Baltimore, Maryland in 1999. Hae Min Lee, a 19-year-old student, went missing on 13 January and was found dead

nearly a month later. Her ex-boyfriend Adnan Syed was convicted of murder and remains in prison to this day.

But did he do it? That's the question host Sarah Koenig tries to answer, by re-examining evidence (or lack thereof), interviewing Adnan regularly on the phone, speaking to his classmates and family, talking to Hae's friends (her family never respond to Koenig), and even retracing the steps of the accused to check that the prosecution's timeline checks out.

It's a project that's inspired feverish devotion among its listeners — a two-million-strong jury for each episode, all desperate to discover the truth — and has signalled an exciting new dawn for podcasts. *Serial* reached five million downloads faster than any podcast in history, and had hit 20 million total downloads before the final episode had even been uploaded. There are pages and pages of Reddit threads dissecting the case and offering new theories; people had listening parties for the finale; *Saturday Night Live* parodied it; and there are even other podcasts devoted to *Serial* punditry. So what is it exactly that's caught the imagination of so many?

### The podcast grows up

"It feels like someone's suddenly said: 'Right, let's do an HBO on podcasts,'" says Scroobius Pip, rapper, spoken word artist and host of the *Distraction Pieces Podcast*, in which he's interviewed everyone from Russell Brand to Alan Moore. His show was, for one week, more popular than *Serial* on the iTunes chart. He even offers to send us a screengrab to prove it.

Tongue-in-cheek rivalry aside, Pip's right. *Serial*'s scope and production values are way beyond what most listeners are used to. It has both a bespoke soundtrack composed by Nick Thorburn and a synth-heavy incidental score by Mark Henry Phillips. Aren't podcasts supposed to be DIY affairs recorded in sheds and bedrooms with whatever makeshift kit the hosts can lay their hands on?

"I bought a recording kit that I can carry under my arm for about a grand," says Pip, "and I've gone to Russell Brand's house or Zane Lowe's or Simon Pegg's and we just talk for an hour. There isn't a theme. The interviews become more like chats — more relaxed, personal and intimate. You're not getting people in promo mode." *Serial*, on the



other hand, is one story told in episodic format week by week – although now it's over, latecomers can binge on it just like they would *House Of Cards*.

Koenig is a former reporter for the *New York Times* and *Baltimore Sun* so developing a story over time is nothing new to her, although perhaps none she worked on in print would have had a gestation as long as *Serial*'s. Koenig began working on it back in 2013, with the first episode released on 3 October last year. At that point she didn't know how it would end. It was a textbook whodunnit for the Twitter generation, although posting any spoilers would get you hounded out of Tweet Town in far fewer than 140 characters.

While this serialised storytelling is, in Koenig's words, "as old as Dickens" – a reference to the way Charlie D used to write a chapter at a time and release them individually, making books more accessible to a less affluent audience – it felt entirely new for podcasts. *Serial*'s parent podcast (and radio show) *This American Life* has been telling one-off stories since 2006 (or 1998 if you include its previous life on RealAudio and Audible.com), but nothing with this kind of long-form narrative arc.

Pip also has radio on his CV – but he isn't planning to do any more. "Last year

I stopped my radio show, which I'd won awards for and things like that, but it was just the thought that podcasts are going to take over.

Why would you tune into something when you can download it to your phone and not worry about losing signal when you go through tunnels on the train? I was a fan of podcasts anyway but I definitely think it's the future. It's a wonderful format."

### Sounding the Bugle

And he's not alone. British stand-up comedian Andy Zaltzman parps on one half of *The Bugle*, a satirical podcast he began in 2007 after his co-host John Oliver moved to New York to work on *The Daily Show* (before landing his own show on HBO, *Last Week Tonight With John Oliver*). Originally funded by *The Times*, *The Bugle* was a way of carrying on the partnership the pair had formed on Radio 4 shows such as *Political Animal* and *The Department*. *The Bugle* has half a million listeners every month.

"It's a great medium because it's basically given anyone the opportunity to make something themselves," Zaltzman tells *Stuff*. "You can do it ▶

**It's easier to make something sound good than look good**

Andy Zaltzman



## A brief history of podcasting

### RSS feeds get audio

A new RSS feature lays podcasting's foundations by allowing audio files to be distributed automatically.

### Apple unveils the iPod

The company's portable jukebox puts audio in our pockets in a way not seen since the Walkman, paving the way for podcast listening.

### The word 'podcast' is coined

Combining the 'pod' from iPod and 'cast' from broadcasting, writer Ben Hammersley coins the term in *The Guardian*. It sticks.

### Apple adds podcasts to iTunes

Version 4.9 of iTunes allows users to subscribe to and download podcasts with a new section created for them in the Store.

### Ricky Gervais gets on board

Signs of mainstream adoption appear with *The Ricky Gervais Show*, which soon becomes the most successful podcast ever.

### Serial smashes records

Out of nowhere, *This American Life* offshoot *Serial* is released. With over 20m downloads, many call it the cultural event of 2014.

2001

2001

2004

2005

2006

2014

## Best podcasting apps

### Podkicker from Free / Android

The free version of this unfussy podcatcher does everything you need for free, but it's worth shelling out for the Pro version if you use it a lot as it removes the irritating ads and adds extra functionality.

### Acast Free / Android, iOS

Acast takes a regular podcast and adds 'blings' on top. It's a horrible name for what are essentially links to extra material related to the subject being discussed. Scroobius Pip is already a big fan.

### Soundcloud Free / Android, iOS

This is not strictly a podcatcher as it only allows you to stream; but if you'd rather not fill up your phone, the app is intuitive and there are plenty of podcasts available on it, including *The Bugle*.

### Overcast from Free / iOS

Created by the geezer behind Instapaper, Overcast is another one worth paying more for. You can unlock tweaks to normalise voice volume and cut out silences to speed up listening.



on a very small budget — all you really need is a decent-quality microphone and a fairly basic sound editing programme — and if it's good, and people like it, then you can find an audience. You don't have to go through the laborious process of getting it commissioned, waiting for the little clouds of smoke to come out of the BBC chimneys or however it is they do it."

That kind of creative freedom is practically unheard of on radio or TV, so to get it on a platform with such world-straddling potential as iTunes is obviously an attractive proposition. "What you always want as a comedian is that total free rein, which is much harder to get in radio or television," says Zaltzman. "You have it in stand-up and you have it in podcasting — and it's far easier to make something sound good than look good."

### Go it alone

It was also a big part of Scroobius Pip's decision to go it alone. "There's no longer any logic in having a boss," he says. "If you've got a boss then you've got to clear any guests or controversial topics. When it's just you and there's no other interference — yet you've still got

that huge platform that previously you'd need something like a radio station for — it's kind of crazy to have a boss. If you can hold it together and make it work, why would you be at someone else's will, when you can have that complete control?"

Of course, that's all very well if, like *Serial*, you've got the backing of a radio station (albeit one funded by listener donations) or newspaper, but what happens when the money runs out?

It was episode nine of *Serial* when Sarah Koenig first asked for money, a necessary evil she genuinely sounds uncomfortable doing. Since its beginning each episode had been bookended with adverts for MailChimp — an email service that became almost as much of a talking point as the case itself, thanks to the mispronunciation of the company's name by a member of the public in the opening ident. But evidently that, plus the support of WEBZ, wasn't enough. How do you fund a year's work when you're giving it away for free?

To keep *Distraction Pieces* going, Pip relies on advertising. With its one-man-and-his-microphone approach, he'd be

**People still think everything on the internet should be free**

Richard Herring





**There's no logic in having a boss when you can have complete control**

*Scroobius Pip*

the first to admit that it's not exactly among the big-budget blockbusters of the podcast world, but nor does he feel its integrity is compromised: "Slaying over a song as an art and then getting into a recording studio feels different; I hope to get a direct payment for that. With the podcast I'd rather the payment comes from a corporation and people get to have it for free, rather than asking them to chip in. It's all a means to an end now."

### Funding issues

While *Distraction Pieces* certainly doesn't shy away from controversial topics – he's already had revolutionary Russell and outspoken rapper Killer Mike on the show – for comedians such as Zaltzman and Richard Herring, advertising has been a minefield of potential compromise, particularly since cult stand-up hero Bill Hicks compared it to heavy petting with Beelzebub back in the '90s.

"I'm quite old-fashioned about adverts," admits Herring, who made his podcast debut in 2008 with *Collings And Herring* and has since released nine others, including *As It Occurs To Me*, *Warming Up* and *Richard Herring's Leicester Square Theatre Podcast*, the most popular episode of which has been downloaded 170,000

times. "If you know that I'll say 'I love Ian Harris's Crisps' even though I don't, but he's just given me money, then what does that mean about everything else I say?" he explains.

Both *The Bugle* and Herring rely on donations from listeners and selling merchandise to keep their shows going. "People are still at the stage where they think everything on the internet should be free, so even if you charged cents the downloads would probably be a tenth or even a hundredth of what they could be," says Herring. "I'm trying to encourage people to make donations of a pound a month, or whatever they can afford. That's building up a smallish fund of money that over time I can use to make other stuff. If everyone who listened to my podcast gave me a quid a year I could make my own sitcom, especially with the cost of producing stuff coming down. At the moment it's about 1% or 2%."

However, both Herring and Zaltzman do recognise the potential power of podcast advertising. "If you do build an audience it tends to be a very committed one, because people listen to podcasts in a very active way," explains Zaltzman. "They have to seek it out, download it and consciously listen to it rather than it being on the radio in the background, so with smaller listener numbers you



**THIS AMERICAN LIFE**



## Stuff's top podcasts

### Stuff You Should Know

No relation to this *Stuff* you're reading now, *Stuff You Should Know* is not a million miles away from *QI*. That is, a perfect source of pub chat (if you can get people to stop looking at their phones).

### Retronauts

There's nothing gamers like more than a dose of nostalgia and *Retronauts* delivers in big, 16-bit spades. It's not all obvious choices either: there's plenty here for even the most hardcore button-basher.

### This American Life

If you liked *Serial* it's worth climbing its family tree and delving into *This American Life*. The stories are over in an episode but they're often unexpectedly captivating.

### Guardian Football Weekly

Ever since James Richardson (aka AC Jimbo) hosted *Football Italia* in the '90s he's been a football fan's friend. Here he hosts the kind of intelligent footy chat you just don't get from Robbie Savage *et al*.

**If you do build an audience it tends to be a very committed one**

*Andy Zaltzman*

get a much more committed audience. If there was a podcast called *The World's Most Brilliant Screwdrivers*, a screwdriver company is far better off advertising there than just on the local radio station."

### Podcast-only networks

Of course, these aren't the only options. YouTube has worked hard to monetise videos using those annoying pre-roll ads and splitting revenues with the uploaders, and there's no reason why audio-only sites such as Soundcloud couldn't do the same, or simply place relevant ads underneath the content.

Herring has accidentally created a successful business of his own, albeit one that's also supported by ticket sales for his live shows, a regular column for

*Metro* and the odd corporate gig, which he justifies by putting the fees towards creating more stuff to give away for free. How else would he be able to release recordings of him playing snooker against himself?

But there are also podcast-only networks springing up out there, such as Brooklyn-based Gimlet Media, which produces shows including *StartUp*, a documentary series about starting your own business, and *Reply All*, which tells stories about things that happen on the internet. There's also Radiotopia, which launched last year after raising over \$600,000 from a Kickstarter campaign and now produces nine different podcast series.

There are also apps such as Acast, which lets podcasters embed links within the audio timeline to offer listeners more information on topics being discussed. Scroobius Pip already uses the app to add more content to *Distraction Pieces*: "It doesn't change the audio at all but if, say, I'm talking to Russell Brand about Athenian democracy, it'll come up with a link to the Wikipedia page for Athenian democracy. Obviously there's a financial side too. If we're talking about his book there'll be a link there to buy it. It just blows my mind that you can embed so much stuff, so in this hour of audio you're potentially getting three or four hours of reading material."

### Casting into the future

While iTunes and Soundcloud are likely to remain the two main places for podcasts to call home, in the search to find a way to make a living from podcasting, other approaches may spring up. How about Bandcamp's direct-to-artist subscription model? While that's designed for musicians, the idea of picking an individual and subscribing to only their output, effectively giving them their own on-demand radio station, is one that could work for podcasts.

In fact, Herring has had a similar idea: "In 1910 Charlie Chaplin was part of a studio but then realised it would be easier to have his own. By charging everyone a tiny amount of money to come and see his films, he was a millionaire within two years. You basically become your own station and I think increasingly that will be the case."

*Serial's* pleas for donations worked. Through a combination of sponsorship and listeners' contributions, the makers have been able to announce that there will be a season two, although the subject is still unknown. What we do know is that, like a new series of *Mad Men* or *Game Of Thrones*, expectation will be sky high – higher than for any podcast ever before. And don't be surprised if others try to emulate its success. ●

## 6 tips for recording your own podcast

1

### Pick your kit

The beauty of podcasting is that you only really need the essentials. A decent USB microphone, a pair of cans and a computer of some sort will do, but if you want to make things sound a little more professional you'll need an XLR mic, audio interface, mixer and some proper studio speakers.



2

### Prep your 'studio'

Any hard surfaces in the room that you choose to record in will make sound bounce around all over the shop, so try to find somewhere with plenty of soft furnishings and a carpeted floor. Close the curtains. Ideally, record your podcast in a padded cell at your local asylum.



3

### Select your software

Whatever you do, don't splash out loads of money on some fancy audio editing software. If you're using a Mac, Garageband is plenty good enough and has royalty-free music you can make use of too. If you're on Windows, Audacity is no-frills but easy to use.



4

### Don't get too close

When you're actually 'on air', don't do a Liam Gallagher and try to eat the microphone like it's a delicious ice cream cone. Six inches away is normally about right. If you've got multiple voices but can only afford one mic, change its recording pattern to omnidirectional.



5

### Make guests welcome

If you want to follow Scroobius Pip or Richard Herring's example and record some interviews but can't convince your interviewees to come to you, use Pamela (R470, pamelabiz.com) or Call Recorder (R345, ecamm.com) to record two-channel Skype calls.



6

### Set it free

If you can't be bothered to mess about with an FTP, RSS, XML and other confusing three-letter abbreviations in order to get your podcast on iTunes, Soundcloud is a good alternative. A Pro Unlimited account costs R1315 a year but allows you to upload as much as you want.





# No walls house party

For years, Sonos has been the undisputed king of multi-room hi-fi. But now others are getting in on the audio action – can anyone pinch the crown?

Bluesound family tree



## Bluesound from R6 950 (import)

### What's the story?

You might not have heard of Bluesound, but this new company has some serious tech heritage. Set up by many of the same brains behind respected British brand NAD, this is a system that is all about putting sound quality first, with support for hi-res files up to 24-bit/192kHz. That's even better than CD quality, and means you get to hear the music just as the artist intended it. This is a big deal for audiophiles – it's one of the only multi-room systems offering this support.

The five-strong Bluesound family aims to fill every sonic situation – from ripping to storage to playback – but at a starting price of R6 950, it's much pricier than its rivals.

### Any good?

Setup is slick and easy, and unless you own the CD-ripping, 1TB-packing Vault (R10 400), which needs to be hardwired, the system is happy to run on your wireless network. You'll want to make sure your connection is strong enough first.

You control what's playing where via an app, and browse any music on your home network or online via streaming services such as Spotify, Tidal and Qobuz.

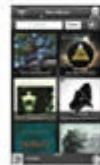
But of course, what's really important is how it all sounds, and the Bluesound system is on top of its game. Hi-res recordings are understandably more detailed and dynamic than you'll hear from online streams and MP3s, but it's not picky – anything you

play through it has the same full-bodied presentation that works with all genres.

The Duo (R15 600) and Pulse (R10 400) both have built-in speakers, but pick the Node (R6 950), or the Pownode (R10 400), which requires a separate pair of speakers, and there's still a strong family sonic signature that's punchy, expressive and powerful with a rich but precise bass and a refined treble.

Bluesound isn't cheap, so if your multi-room motives stretch no further than streaming from Spotify, your money may be better spent elsewhere. But if you have a NAS drive full of hi-res music, or like the idea of getting one, this is the best-sounding multi-room system you can buy.

### The app



Control of all players and services is dead easy through the Bluesound app, and support for the Tidal CD-quality music service is awesome

### STUFF SAYS

The greatest challenge to Sonos yet seen, and the best option for audio nerds

★★★★★

## Pure Jongo X from R900 (import)

### What's the story?

Pure's Jongo system was one of the first to take on Sonos, but with a more affordable price tag. Now in its second year, it appears to have done a bit of growing up. Gone are the colourful grilles, and in their place is a simpler, more mature, monochromatic look.

There have been changes internally too, including a major audio update, improvements to the user experience and app, and the introduction of Caskeid Bluetooth multi-room functionality.

It's also the most affordable option by quite a margin, starting at just R1750 for the smallest T2X speaker. If you're upgrading your existing hi-fi it's even cheaper: only R900 for the A2.

### Any good?

The newly updated Pure Connect app makes a great first impression, with step-by-step instructions bringing Sonos levels of simplicity.

Where it does begin to get a little tricky is in the way Pure Connect doubles up as both the control app for your multi-room system and local music, and the home of Pure's own streaming service – which, if you're not a subscriber, can just get in the way.

You can't access any other streaming services through Pure Connect either – you have to use the speakers' Caskeid Bluetooth functionality and control the music from your app of choice, which feels disjointed. Using this

method is a little more limited than just streaming through Pure Connect, too – you can't play different songs through different speakers.

Sound-wise, the Jongo family is certainly not short on power, though for the most balanced presentation you can reach into the EQ settings and knock the bass down a notch or two.

This doesn't affect its up-front and energetic character, which is enjoyable and hugely listenable, but overall, there's a touch more refinement and clarity needed to challenge the best.

At this price, though, there's little to complain about. If you're on a budget and want a flexible system, the Pure Jongo setup should definitely be on your list.

### The app



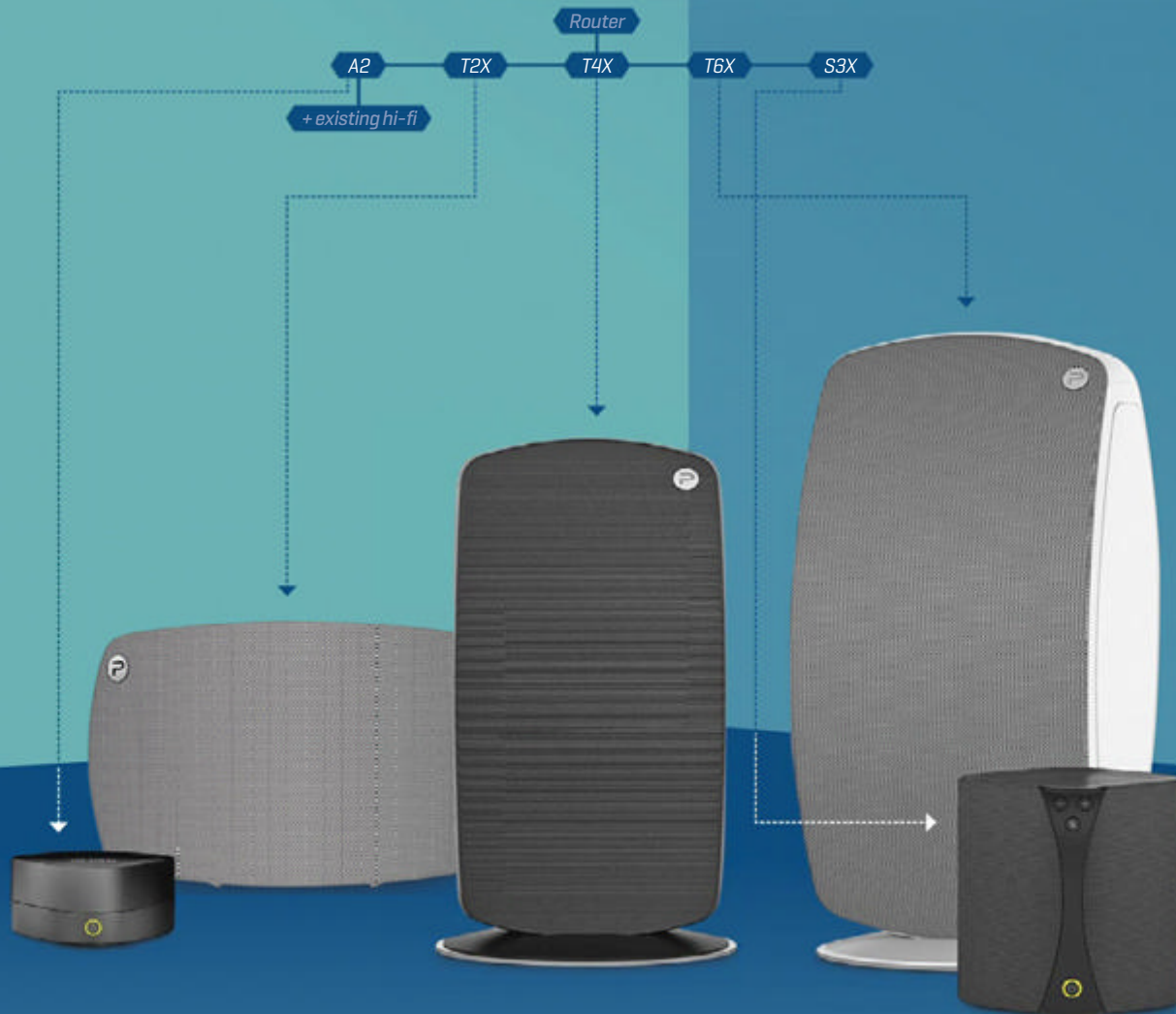
The focus on Pure's own Connect music service is understandable, but perhaps not ideal for Spotify users (ie: everyone)

### STUFF SAYS

Sing with us: Jongo, (um) Jongo, it's really quite affordable for your audibles...

★★★★☆

### Pure Jongo X family tree





## Samsung M Series from R4 000

### What's the story?

It was only a matter of time before Samsung took a punt at multi-room audio.

The three all-in-one speakers have the same design that allows them to be used either laid flat or stood upright. There's also the WAM-270 Link Mate (R4 540 – import) for connecting to any existing hi-fi, and even some of Samsung's new soundbars, home cinema systems and TVs can link up with the system.

You will need to buy the R4 500 wireless Hub, which hardwires to your router, but otherwise, prices for the various components undercut the Sonos equivalents. With NFC, Bluetooth and DLNA connectivity included, there's even a spec advantage.

### Any good?

Setting up is simple and, as with every other system, there's an app to act as the control centre, offering an easy user interface for browsing your music and deciding what's playing where.

It's not quite as seamless as Sonos just yet, with local and online music sources not working together seamlessly enough to feel as though you own all of the music there is. Not only are you unable to build a playlist with a mix of local and streamed music, but you can't build and save playlists using streaming services at all. You'll have to have those prepared in advance.

File compatibility is pretty good and hi-res music is supported up to a point too, offering playback of

files up to 24-bit/96kHz. It will actually play tracks of a higher quality, but they're downsampled on the fly so you don't get all of the extra fidelity.

The mid-sized M5 speaker (R4 000) is our favourite, offering the best balance across the frequencies, particularly when compared to the larger M7 (R5 000). The new M3 (R2 800 – import) provides an even smaller solution with a cheaper price tag.

Whichever speaker you opt for, we found bass tighter and sound better dispersed when they're standing up, but it's worth having a play around yourself.

It's a shame Samsung hasn't quite managed that strong family sound across its range like Sonos has, but it's not far off.

### The app



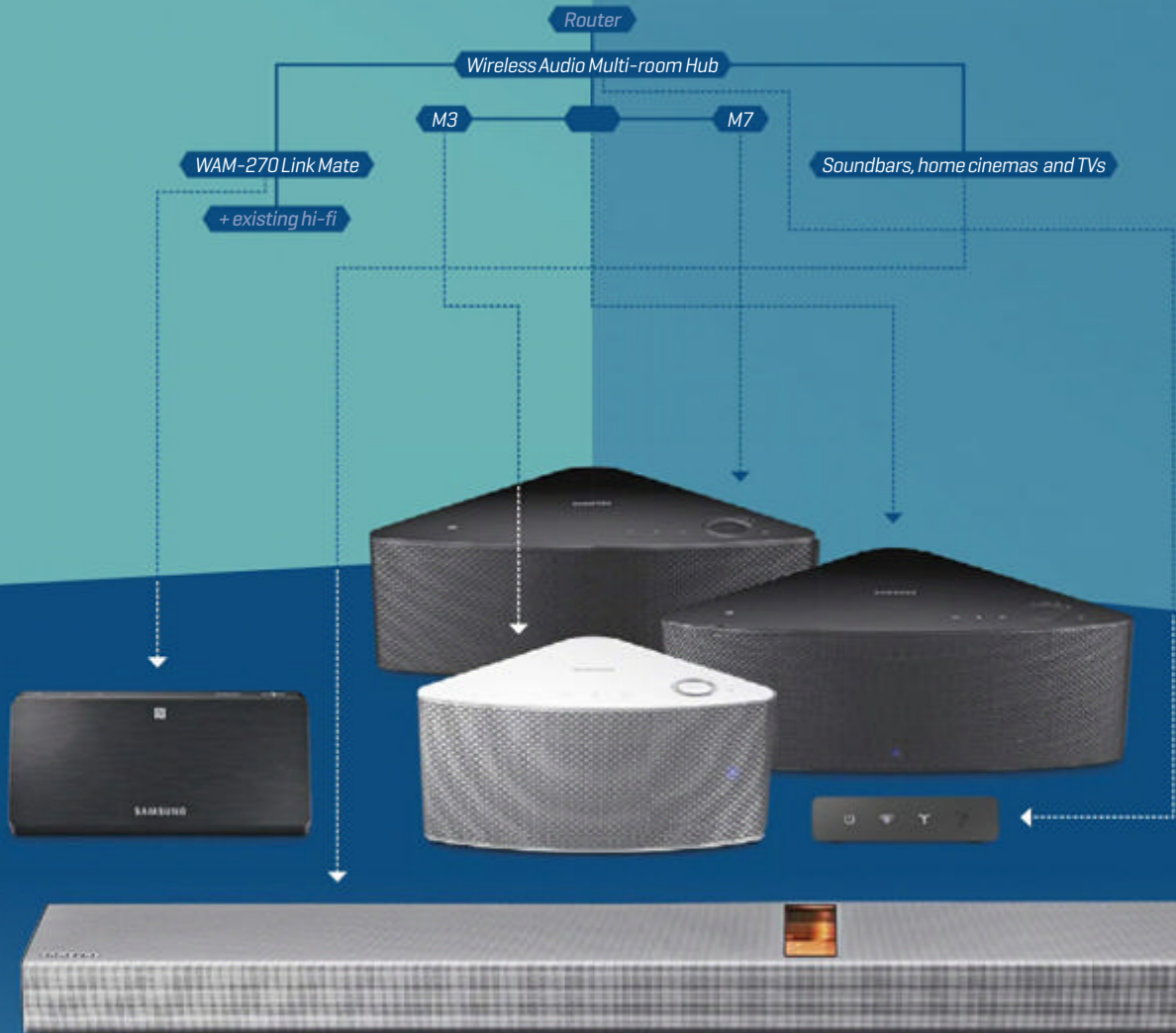
Samsung's app is clean and simple, but segregating songs from different services makes you feel less like an all-powerful DJ

### STUFF SAYS

This is mighty impressive – we're already excited about the second generation

★★★★★

### Samsung M Series family tree



## Sonos from R4 500

### What's the story?

When it comes to multi-room audio systems, Sonos has pretty much single-handedly shaped the market into what it is today – so much so it's hard to know if it even truly existed before Sonos did. For years it's set the bar for design, sound quality and ease of use, and for the most part has been left largely unbothered by any of its competition... at least until recently.

As a system, it has two big things going for it: breadth of choice and simplicity of use. In the time its rivals have needed to play catch-up, it's been able to launch a huge range of products and get on side with a long list of streaming services, not to mention really nailing the usability side of it all.

### Any good?

Sonos's experience shows. With eight main products in its line-up, it has the majority of situations covered, whether you're starting from scratch or just want to add multi-room to an existing hi-fi.

This means you can buy into Sonos from R4 500 (for the Play:1 speaker), with the comfort of knowing that this is a system can grow with you, whatever your needs and budget.

It only takes minutes to get up and running, and a recent update means the system will work entirely on your home wi-fi, though you might consider a Sonos Bridge (R1000) or the wi-fi-enhancing Boost (R2 000).

The supporting app and user interface have been honed to

near perfection. Support for streaming services is the best out there, meaning you can move seamlessly between over 40 services and any music stored on your home network.

There is one limitation: Sonos only supports up to CD-quality files, so anything higher than that simply won't play. Those with a penchant for hi-res will need to look elsewhere.

When it comes to performance, Sonos offers rich, well-balanced character that makes for an engaging listen. It can't compete with Bluesound's level of detail, but there's still plenty of insight up for grabs here.

The original and still the best for most people, Sonos remains a thoroughly stylish option.

### The app



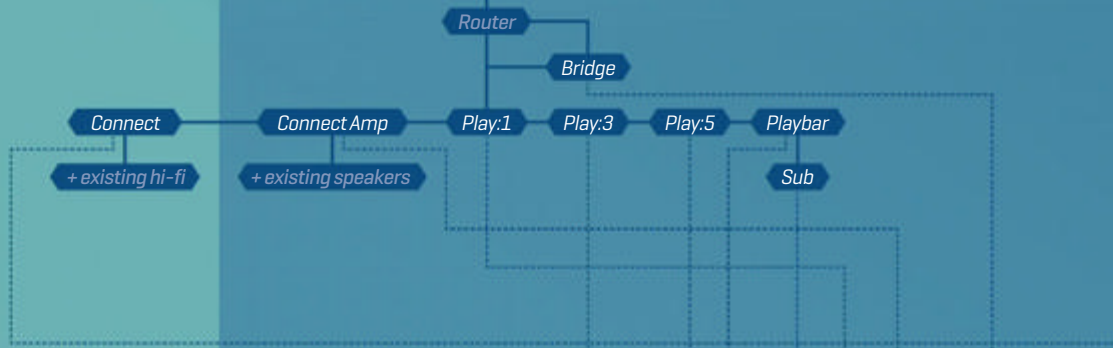
Still the benchmark, Sonos's app has been whittled to brilliance: the latest update is global search across all services

### STUFF SAYS

The challengers are stronger than ever, but Sonos still comes out on top... for now

★★★★★

### Sonos family tree





5 OF THE BEST

# In-ear headphones

The world of 'phones can be a perilous place, especially at the budget, in-ear end of the market. There are countless options out there... which of them deserve a place in your lugholes?



## Soundmagic E10S

SoundMagic's laurels appear to be in no danger of being sat on, as it continues to squeeze every last drop of magic out of the E10S.

The latest change is the inclusion of a one-button inline remote, and an unusual 3.5mm plug with a 'compatibility switch', which makes sure the remote's button works across phones of all flavours.

The sound is better than ever, with the latest tweaks resulting in a smoother delivery. Bass weight is well judged for punch and agility. There's also plenty of detail and a great sense of space.

**Stuff says ★★★★★**

At this price, these are phenomenally good

**Price** POA / sound-magic.co.za

## AKG K323XSi

These AKGs are amazingly small and won't stick out of your head even if you have very flat ears. Tiny doesn't mean lacking in substance, though. Build quality is good, the cable's strong and there's a three-button inline remote for Apple users.

Fitting is a little awkward: it's hard to grab them to wiggle them into position. But it's a dynamic sound, with plenty of punch and attack. There are bags of detail, good for articulating every scrape and hiss of that hi-hat. Very occasionally the sound is a little hard at the top end, but it's not enough to ruin the enjoyment.

**Stuff says ★★★★★**

Don't underestimate these tiny buds

**Price** R800 / ampliphonic.co.za

## Sennheiser CX 3.00

It's kind of a special occasion for Sennheiser. After a string of similar-looking products, we now have something radically different and Beats-like. There are red, white and black options, with the buds displaying just the tiniest bit of bling.

Angled tips replace the straight-body design, which makes the buds easier to fit. They're comfy enough for long-term use.

An excellent seal means good noise isolation. It's a smooth, full-bodied sound, with plenty of weight and punch to the bass. But that bass is also overpowering, with little in the way of refinement

**Stuff says ★★★★★☆**

A comfortable listen, but not one for subtlety

**Price** R1210 / importital.co.za

## Maxell MXH-DBA700S

In contrast to the AKGs, these Maxells are rather long, with a trumpet shape that sticks out quite a bit. Build quality is a mixed bag. The buds themselves are housed in aluminium but the rest feels a bit plasticky, especially the one-button inline remote.

The buds boast a hybrid design, with balanced armatures and 8mm dynamic drivers to enhance bass and vocals. Bass is certainly deep: put on Leonard Cohen and you can almost feel the phlegm. It's not a delicate sound, though. Greater clarity and stronger dynamics would help.

**Stuff says ★★★☆☆**

Great if you like deep bass and not much else

**Price** R875 (import) / maxell.eu

## Audio-Technica ATH-CHX5IS

Every now and then a design brings to mind no words but 'WTF'. For starters, these are huge by in-ear headphone standards. And they're difficult to fit, with a design that means they're intended to nestle in the bit outside the ear canal. The idea is to be less invasive, but this means no proper seal and that leads to all manner of issues. Isolation is poor. The sound is insubstantial and hollow. Dynamics are not worth mentioning.

Still, at least there's a one-button remote with a volume slider.

**Stuff says ★★☆☆☆**

Little in the way of style or substance – don't do it

**Price** R1310 / wantitall.co.za

# Better than 4K

The best TVs are all 4K, right? Not right. This LG's 55in OLED screen shows it's not about how many pixels you have...

Rtba / lg.com/za

It's a period of uncertainty in TV land. Plasma screens have taken a bow and LCDs are all the rage, but more than one emerging technology is lining up to be the next big thing.

Pixel-packed 4K has been around, in the upper end of the price spectrum, for a while. But while there are some great 4K TVs (The *Stuff* Top 10-topping Samsung 55HU8500, for example), they're still waiting for people to start making anything to watch in 4K.

OLED TVs have been around longer still, but while they were always full of potential, they were also hilariously expensive. So it's with great interest that we fired up the LG 55EC930V, a 1080p OLED wonderscreen that should be — just about — affordable.

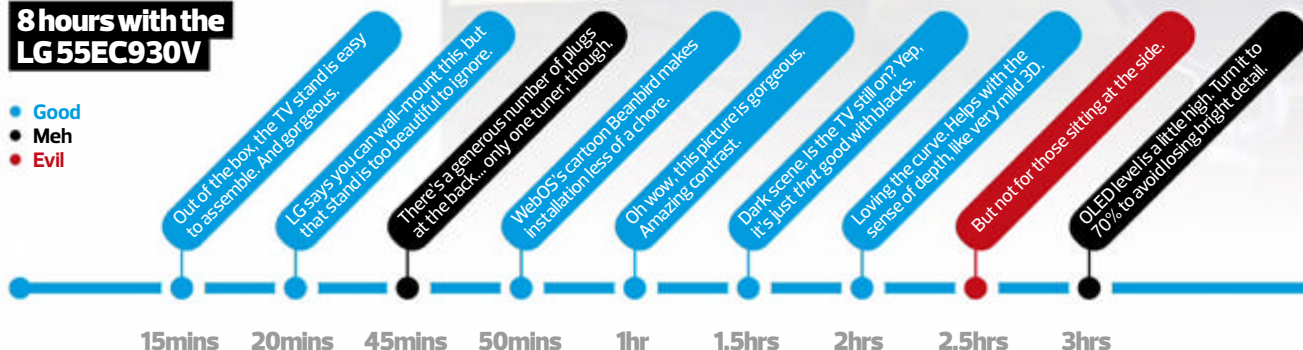
## 1 OLED but gold

OLED (organic light-emitting diode, fact fans) screens have self-illuminating pixels, which give them an edge. They don't need the superheated gases that a plasma screen uses, which contribute softness and picture noise. And because they emit their own light, there's no need for the thickness-adding, colour-adding backlight you find in LCD TVs.



## 8 hours with the LG 55EC930V

- Good
- Meh
- Evil





2



## 2 Why the curved face?

Curved screens are the flavour of the year, because they can offer better viewing angles – straight-on viewing is ideal, but anywhere within about 30° from the centre is fine – and can help reduce glare. They also look pretty and they're distinctive, which helps to quietly let people know you spent a ton of money on your TV.

## 3 Best. Screen. Ever.

It's a stunner. The levels of contrast and dynamism are a revelation. Blacks are so deep it sometimes looks as if the screen is off. That's skilfully juggled with dazzling whites and punchy, vibrant hues. Insight comes from the finely-drawn textures and edges. There's no light bleed. No, it's not 4K, but you won't be counting the pixels.

## 4 Pretty, shiny

If you can stop wondering at the picture quality, there's still plenty to admire. LG has done wonders on the design front. The screen is remarkably thin: most of it is no thicker than a pane of glass. Its simple elegance elevates the TV from a well-performing machine to a design choice.

## 5 Point and slick

LG's nifty WebOS interface arranges all your sources in one line of colourful tiles. Switching from web-based apps to local inputs is as easy as skipping channels. Main attractions include Netflix, Amazon Instant Video, Now TV and YouTube

## Techspecs

**Connections** HDMI 1.4 x4, USB 2.0 x3, Composite, Component, SCART, digital optical output

**Resolution** 1920x1080 **Aspect ratio** 16:9

**Screen size** 55in/140cm **Dimensions** 715x1225x80mm (753x1225x204mm with stand)

**Weight** 14.4kg (22.4kg with stand)

## 4K or OLED?

### The case for 4K

More is... well, more, and 4K delivers four times more pixels than 1080p Full HD. It's the next step of the journey we took from VHS to DVD and Blu-ray, and it brings more detail, sharper edges and more natural colours. You can also have a much bigger set without the pixels becoming obvious – 55in/140cm screens are now the bottom line. Netflix and Amazon Instant Video are the places to get your 4K fix right now, but there's still not that much to watch.



### The case for OLED

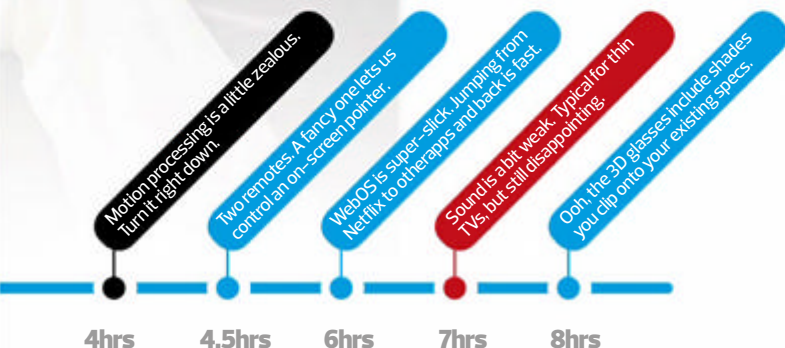
But what of quality over quantity? OLED might have far fewer pixels, but every pixel is made special from self-illuminating tech. OLED offers picture quality so high it's easy to forget about the numbers – and you don't need to press your nose to the screen to see the difference. Even if you bought a 4K TV it would be ages before you could feed it a 4K-heavy diet. Why not make those millions of hours of HD look better than they ever have before?



We love 4K, and in a perfect world a switch would be flicked and we'd all be watching everything with millions of pixels. But we don't live in that world and 4K is still more promise than reality. No TV out there makes the most of what I watch right now better than this LG. If TVs arrived that combined OLED and 4K, I'd be ecstatic.

## STUFF SAYS ★★★★★

4K might be the future, but this LG OLED is the most amazing TV you can find now





# Wearable tech takes the stage

Wearable gadgets might once have been clumsy, half-developed things, but they've come of age. This year's Consumer Electronics Show was awash with on-body tech, and we've attached hundreds of devices to ourselves (not all at once) to bring you our top 10...





### WITHINGS ACTIVITÉ POP

There's only so much space on a wrist. By the time you've added a normal watch, some bling and a fitness band, you look like a wannabe selling knock-offs on the side of the road. The Activité Pop is less Del-Boy and more The Man From Del Monte. It's a real watch, for a start – one that tells the actual time.

An auxiliary dial shows how close you are to daily goals that you set on the accompanying app (things like steps taken, calories burned and distance covered). It also monitors your sleep, and you can even take it swimming. It's simple and elegant and unobtrusive – no look-at-me LEDs to tell everyone that you're honestly definitely working out, like, ALL the time. And the battery lasts a whole eight months – almost as long as a 'real' watch.

[withings.com](http://withings.com)



### OPINION CÉDRIC HUTCHINGS CEO, WITHINGS

At CES, Cédric called the Activité the "first true wearable".

He wasn't being pompous; it looks great, and you don't need to take it off every few days to charge. So while other gadgets are 'smarter', none are easier to wear. Style and practicality are just as important as functionality in the world of wearables.

The Pop swaps the original Activité's premium steel alloy, leather and toughened sapphire glass face for PVD-coated metal and silicone, but it still feels good and costs, at R1700, a lot less.



## ▲ RAZER OSVR

OK, so some areas of wearable tech are still at the prototype stage, but that doesn't mean they're not worth getting excited about. In fact, since Oculus first unveiled its Rift developer kit, the gaming community has been squirming in its seat like a puppy full of energy drinks in fervent anticipation of the Age of Virtual Reality. Razer's OSVR is, like the Rift, a dev kit, and it's the good kind: the 'OS' stands for Open Source, meaning people can build software and hardware for it using any operating system – yes, even Windows. You can get CAD files to 3D-print it, although the comparatively bargainous R2 300 price tag means that probably won't be necessary. The unit we saw was paired up with a Leap Motion controller, so it can even recognise hand gestures.

[razerzone.com](http://razerzone.com)



## ■ ■ ■ HANDS ON TEIN HEE SEOW STUFF SINGAPORE

Razer's headset fitted snugly, and while it was still wired to a laptop, there were no physical controls attached. During the demo, I used gestures to sling fireballs while frantically turning my head in search of the ghostly targets. It's early days, so the controls were a little buggy, but it's moving in the right direction.

The OSVR's goggles house a 5.5in/14cm, 1080p display that can be replaced with a phone, so you can use it to build PC games, Android apps or anything else you think might work for virtual reality.





### AMPSTRIP

Think fitness wearable, and your first thought will almost certainly be 'watch'.

But watches are so passé. What you really want is an invisible, strapless tracker that monitors your every move 24/7. One day, embeddable trackers will do all this for us, but until then there's this. AmpStrip is a plaster, basically, worn on the left side of your chest where your heartbeat's strongest. And it only needs removing once a week for a wireless charge of the batteries and change of adhesive strip.

The rest of the time you can swim, run and cycle, with the partner app letting you know exactly how hard you're working. This is the future of fitness trackers, and it's available from June.

[ampstrip.com](http://ampstrip.com)



### SENSORIA FITNESS SOCKS

Socks? Really? Yes, really – because these aren't just any old foot-gloves. These socks contain dual sensors, one under the ball of your foot and another underneath the heel, that measure the impact of running on your feet before sending the data to the tracker attached to the sock.

Small increases in your step rate can reduce unnecessary pressure on your hip and knee joints, helping to reduce running-related ailments. Real-time audio feedback helps you keep to the desired number of steps per minute so that you can improve your run by subtly adjusting your gait. You can even view a heat-map of your feet in the accompanying app, seeing which areas you predominantly land on.

[sensoriafitness.com](http://sensoriafitness.com)



### BELTY

If your competitive eating habit has meant you piled on the kilos over Christmas, this smart belt will be a

godsend: it eases the pressure on your expanding waistline by loosening itself as you sit down, thanks to a small motor in the buckle. But it's not just about making life easy for you. The belt also packs an accelerometer and gyroscope, syncing with an app to track your movement. If you stay still for too long – or if the belt finds that your growing girth is cause for concern – it'll prompt you to get up and do some exercise. Yes, it's pretty silly and surely not as useful as the other fitness trackers here. But sometimes silly is OK, especially when it's as clever as Bilty.

[emiota.com](http://emiota.com)





### GARMIN VIVOACTIVE

The Vivoactive is the Jessica Ennis of timepieces, combining a staggering array of sporting talents in a remarkably svelte form. There's daily activity tracking, deeper GPS-based analysis for triathletes, plus Bluetooth notifications from iOS or Android. Throw in Garmin's Connect IQ store and you have the makings of an Olympic champ.

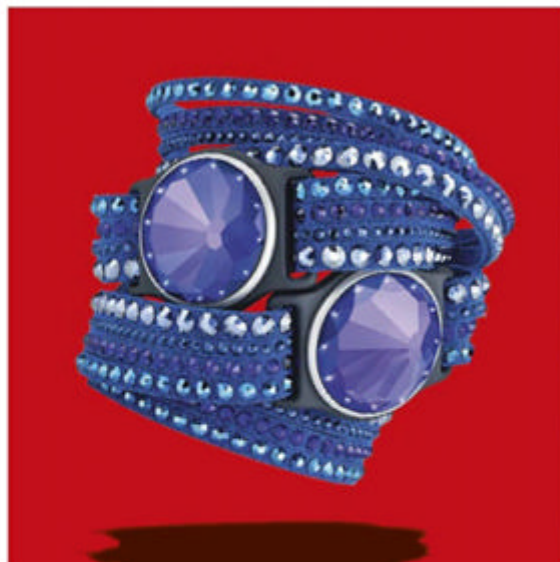
[garmin.com](http://garmin.com)



### LOOKSEE

Like liquorice-poached salmon, the LookSee combines two unlikely bedfellows to brilliant effect. An E Ink smart bracelet with a one-year battery, it has hundreds of patterns to choose from, or you can make your own. With support for iOS notifications, it proves jewellery and wearable tech really can be a great combination.

[lookseelabs.com](http://lookseelabs.com)



### MISFIT SWAROVSKI SHINE

This bling-encrusted activity tracker solves one of the main problems of wearable tech: power. Craftily concealed solar cells turn light from the sun, LEDs and halogen lights into enough juice to power its fitness- and sleep-tracking talents. Sparkly wearables that don't need charging? Make us a Mr T version and we're in, fool.

[misfit.com](http://misfit.com)



### SONY SMART B TRAINER

Sony's lughole-based personal trainer will give you ears of steel. The prototype running gadget uses GPS and a heart-rate monitor to track your progress, telling you when you need to speed up and switching your music to something more fast-paced by way of encouragement. Whether our legs will respond remains to be seen.

[sonymobile.com](http://sonymobile.com)





**ALCATEL ONETOUCH WATCH**

A smartwatch is one thing. A smartwatch that costs R1700 is another. A smartwatch that works with iOS and Android is yet another. The Alcatel OneTouch Watch is all of those. It runs on a proprietary OS that can play with phones from Apple and Google, and is appropriately nosy when it comes to your wellbeing, keeping several eyes on you with a heart-rate monitor, accelerometer, gyroscope, altimeter and compass, as well as sleep-tracking, steps, distance and calorie monitoring. It'll receive notifications and control your tunes, the battery lasts 2-5 days, and four finishes are available: dark red and black, white, chrome, and metal-white. If this budget wristputer delivers on its promises, it could be the one that brings smartwatches to the masses.

[alcatelonetouch.com](http://alcatelonetouch.com)



The OneTouch's low price comes at, er, a price. It won't work with Google Now's voice commands and the extent of iOS notification support is still up in the air.



**HANDS ON**  
**JOHN STEWARD**  
**STUFF CONTRIBUTOR**

Rather than swiping straight at the OneTouch's screen to bring up its menus, you tap it at the bottom first. Tapping the right spot can be hit and miss, possibly because the watch is a touch smaller than Moto's 360. Still, that'll be welcome to those put off smartwatches thus far by the slight chunkiness of their bodies.





# The Talos Principle

It's the end of the world as we know it, and I feel... metal? Wait, where am I? What am I? And just why am I firing lasers at doors to collect *Tetris* pieces?

**T**here's not much mystery in games these days. Look at recent big hitters such as *Shadow Of Mordor* or *Far Cry 4* and you see a first half-hour of expositional cutscenes and a bombardment of instructional text that let you know almost exactly what's going on and how you interact with it. Which is fine, but leaves you little to ponder as you slash and shoot your way through the remaining hours of play.

But there are still some games that do things differently – games

that coax you in the right direction with intrigue and subtly designed gameplay mechanics – and *The Talos Principle* is the best example since the original *Portal*.

You're some kind of mechanised biped, that much you know. In the ruins of what seems to be an abandoned civilisation. And there's a godlike being calling you 'child' and urging you to complete puzzles to prove yourself so you can attain mortality.

You crack into these puzzles (well, why not?) and find that each

is a small maze containing doors that need to be unlocked by turning switches, or guiding lasers from source to receiver, and that each has at its heart a *Tetris*-like shape. Collect enough shapes and you can use them to complete a puzzle and unlock the door to a new area, or a tool that you need to complete future puzzles.

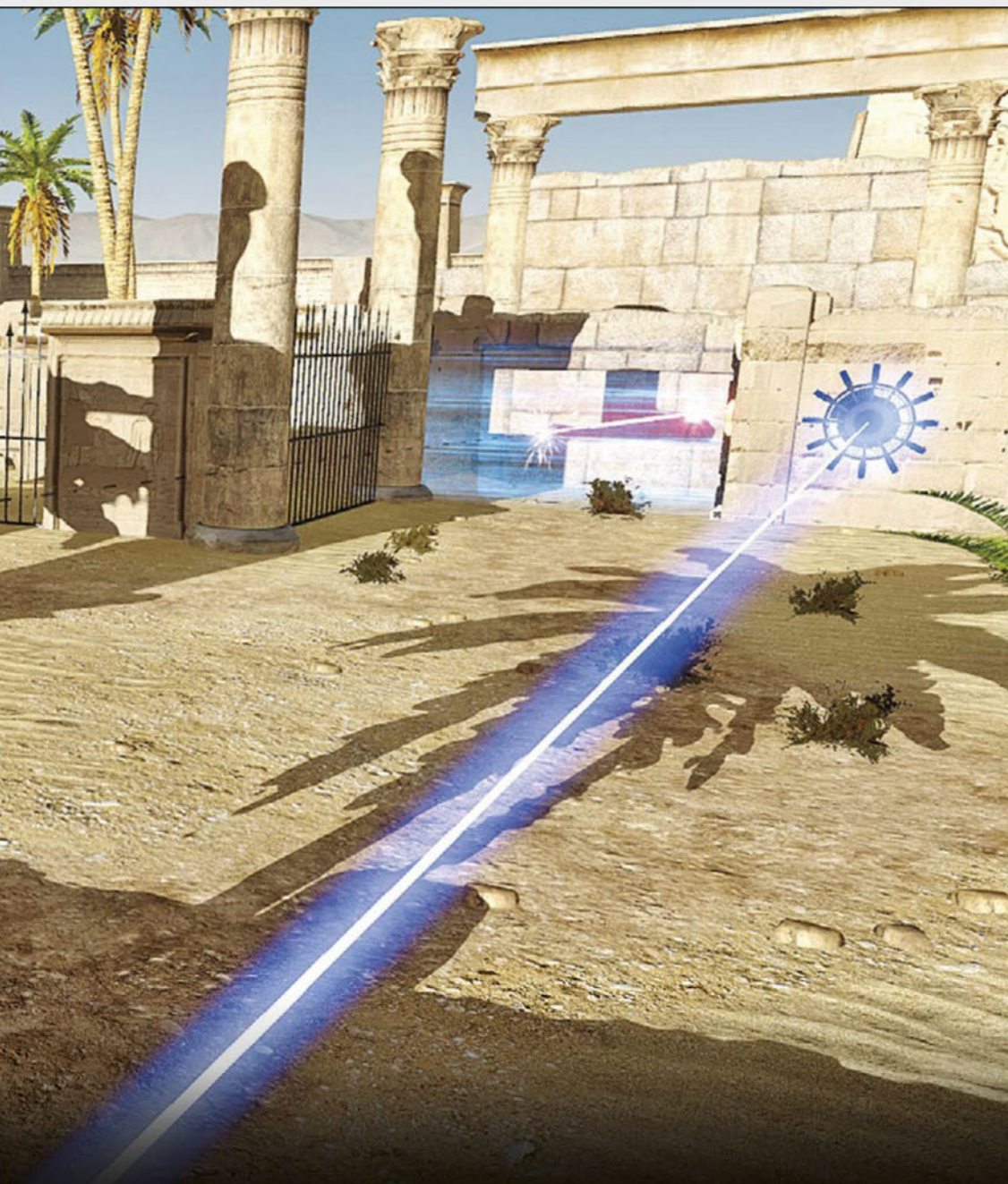
It sounds very simple, and in many ways it is, but the problems are so ingenious, the solutions so logical (even those that initially look impossible) and the learning

curve so perfectly judged that you'll be completely hooked in no time. There are no tricks here – it's just a case of thinking, unravelling the elements and utilising all the skills the game has already quietly taught you, and soon everything will come together in a moment of joyous satisfaction.

If *The Talos Principle* was nothing but the puzzles it would still be pretty great, but the philosophical story raises it up to brilliance.

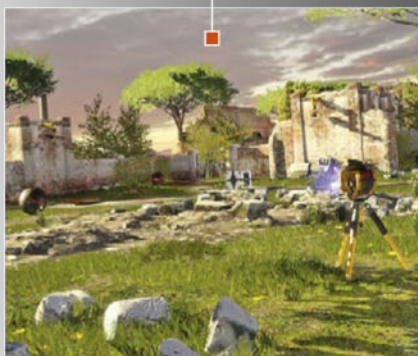
**STUFF SAYS** Beautifully presented and genuinely thought-provoking – utterly brilliant ★★★★★





There are three 'gardens' full of puzzles. It's sort of like *The Crystal Maze*

Why doesn't Elohim want you going into that tower?



### Just what the heck is going on?

There are a lot of questions to concern yourself with when you're not redirecting drones and jamming sentry turrets. Questions such as "Who am I?", "What am I?", "What happened to everyone else?", "Is this a dream?", "Who made me?" and "What should I have for breakfast?". OK, maybe not that last one.

The game encourages musings on consciousness and what makes us human, and there's a constant philosophical battle going on between faith and science, the former represented by the celestial voice of Elohim, the latter by the Milton Library Assistant — a sort of helpful AI stored on a network that you interact with via terminals dotted around.

You can also view emails and sections of philosophical texts that gradually give you hints as to what happened to the people who may or may not have created you and the place where you find yourself.

And then there's the tower, looming over the land but strictly off limits according to Elohim. But wait — it is possible to get in there. And Elohim loses sight of you when you do. What does that mean? And what happens if you unlock the higher floors? There's only one way to find out...



# Media hoard

Take a substance-induced stroll on the beach with these two or sample some other new releases: a bunny-boiler, a Britpopper or even a bewildering beekeeper...

WATCH

## Inherent Vice\_cinema

**P**aul Thomas Anderson adapting Thomas Pynchon was always going to be unwatchable or unmissable. So which is *Inherent Vice*?

Joaquin Phoenix plays Larry 'Doc' Sportello – a beach-dwelling, pot-smoking private investigator with the hair of Wolverine and the wardrobe of Shaggy from *Scooby Doo*. When two people come to him for help – one an old flame, the other an ex-con – and mention the same name, he finds himself in the middle of a what is essentially an old-fashioned story of revenge, disappearances and deceit involving the FBI and mysterious organised crime. And it's played out through a haze of weed smoke hanging over California in the early '70s.

Anderson has picked Pynchon at his most playful. An early scene involving Doc, his attorney Sauncho Smilax (Benicio Del Toro) and Josh Brolin's show-stealing, frozen-banana-eating detective Bigfoot Bjornsen is just one of many laugh-out-loud moments that haven't had a place in his recent films.

After more than two hours, very few of *Inherent Vice*'s many threads are fully tied up (you should expect nothing less from a new PT Anderson film) but those that are satisfy in an unexpectedly heartwarming fashion. The others are lost in the woozy fug left by the trip. But then, that's kind of the point.

STUFF SAYS ★★★★★



## Selma\_cinema

No, not a biopic of Marge Simpson's sister but the story of a landmark period for civil rights. Based on an Alabama march from Selma to Montgomery, led by Martin Luther King (played majestically by David Oyelowo) this is classic awards fodder, but its violence – police attacking unarmed black people – is a stark reminder that the fight continues today.

STUFF SAYS ★★★★★☆



## Gone Girl\_Blu-ray

David Fincher binds Gillian Flynn's whodunnit into 149 minutes of sexual frenzy, media manipulation and more fake blood than a slasher flick, distracting from various loose ends. Rosamund Pike has us believe she is the ultimate femme fatale, while the plot twists at 1000 thriller-Watts per hour towards a culmination that brings a powerful wave of unease.

STUFF SAYS ★★★★★☆



## LISTEN



## Matador

\_Gaz Coombes

Many might expect Gaz Coombes' own material to fall into the post-Britpop trap of standard jangly, singer-songwriter guff, but the former

Supergrass frontman's second solo record shows he's capable of writing much more than just the cider-in-a-field anthems for which his old band became hugely popular. In any case, they were always much more than that and the swelling

synths, fuzzed-up guitars and laid-back piano on *Matador* coat the kind of effortlessly sophisticated melodies that filled the band's later records.

Less obtuse than a Thom Yorke album but no less ambitious, alongside the Super Furry Animals' Gruff Rhys, Coombes shows that Britpop wasn't the cultural wasteland many think it was.

STUFF SAYS ★★★★★



## No Cities To Love

\_Sleater-Kinney

For their first record in 10 years, Sleater-Kinney aren't holding back. There's an urgency to *No Cities To Love* — words almost force their way out and guitars strain at the leash. The trio have channelled their decade of rage into 10 taut, angular punk rock songs that prove they've most definitely still got it.

STUFF SAYS ★★★★★



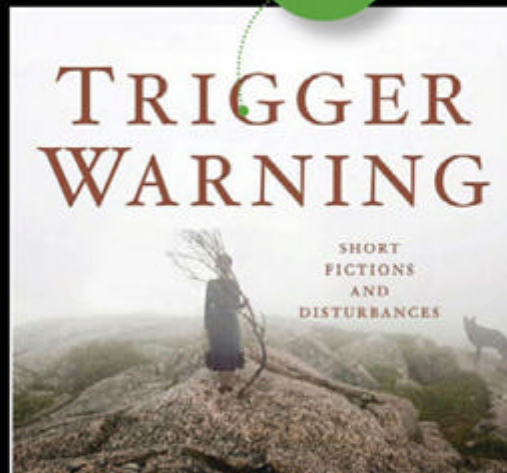
## The Race For Space

\_Public Service Broadcasting

PSB combine trippy grooves and Mogwai swells with samples of spoken word recordings. It's a formula that can get a bit weird, but the conceptual theme of their second album — built largely around the words of Apollo mission control staff — at least gives it an atmosphere all of its own.

STUFF SAYS ★★★★★

## READ



## Trigger Warning

\_Neil Gaiman

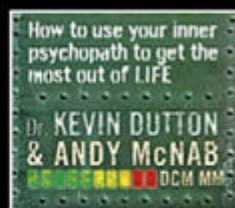
Sorry, comic-book fans: this is an anthology of *Sandman* author Gaiman's short stories. So there are no pictures at all, just words. Small black words, in a dreary font, on a plain white background. Where's the fun in that?

The fun, in fact, is just about everywhere. These are wildly diverse yet consistently engrossing tales with the odd mystical twist but no over-tidy endings: where lesser

writers struggle to tie up all their explanations in the short format, Gaiman is happy to leave questions floating in your brain.

Topics include imaginary girlfriends, Hebridean adventurers, murderous landladies and — in a story that somehow manages not to be preposterous — Sherlock Holmes keeping bees in China.

STUFF SAYS ★★★★★

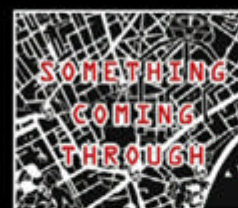


## The Good Psychopath's Guide To Success

\_Dr Kevin Dutton & Andy McNab

McNab is a 'good' psycho, apparently — free of fear and empathy, but not the full Lecter. Dr Dutton says we can learn from him, but the swears, Danny-Dyer-does-science style grates, and a world with less empathy doesn't get *Stuff's* seal of approval.

STUFF SAYS ★★☆☆☆



## Something Coming Through

\_Paul McAuley

McAuley's other books have been set on other worlds, 10 million years hence, but his new novel begins in a near-future London, where alien algorithms are infecting people's minds. Classic sci-crime elements, a whiff of cyberpunk and some clever ideas make this well worth a read.

STUFF SAYS ★★★★★

# Roboxing clever

**A 3D printer that's user-friendly and up and printing in under 10 minutes? The CEL Robox might just be taking 3D printers into the mainstream...**

■ The CEL Robox looks a lot more polished than other 3D filament extruder-type 3D printers; it has an enclosure door, integrated filament spool and even curves!

■ Open up its AutoMaker software and you get a graphical representation. It's great for easing in first-timers, unlike the usual wall of input boxes. Click the light and it changes colours, click the extruder head and it moves.

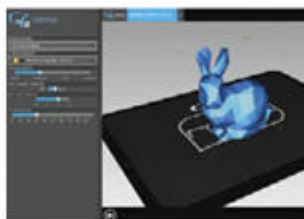
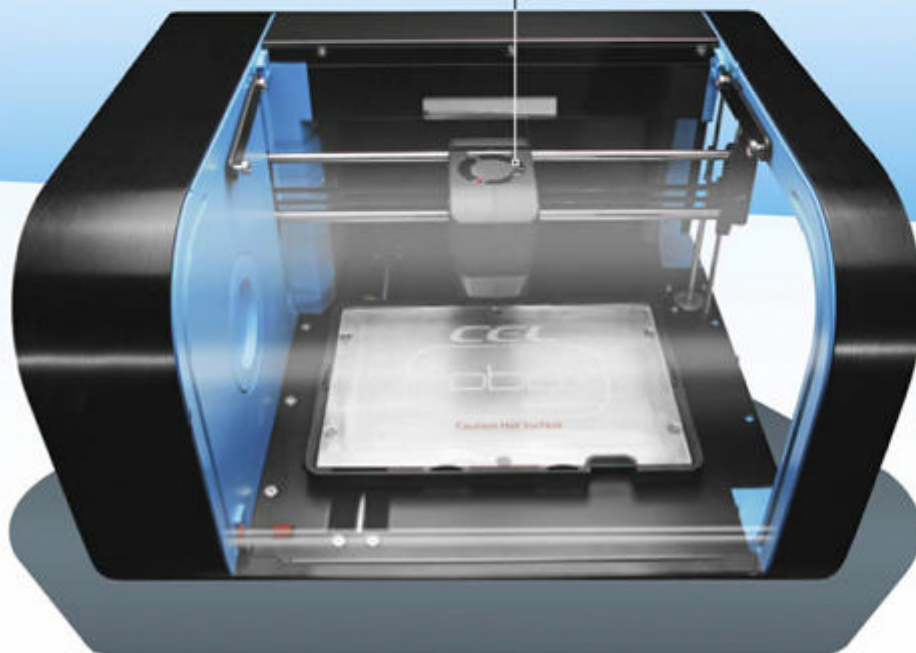
■ Importing STL part files and positioning them is simple. From there you can either jump right in with presets or expand the options to adjust the parameters yourself. It then sends it through the included Slic3r program and starts printing.

■ Treading the line between convenience and restrictive practice, the Robox's filament-laden SmartReels are recognised by the machine – but you can use third-party filament too.

■ The heated self-levelling print bed is a joy. ABS prints adhere well and the heat-retaining door helps avoid warping. The dual extruder, which alternates between fine detail with its 0.3mm nozzle and fast infill with the 0.8mm one, works well. And the needle-valve system prevents any oozing stringy bits.

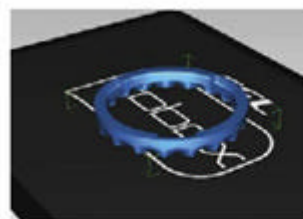
## Tech specs

**Build volume** 210x150x100mm  
**Compatible materials** ABS, PLA, PVA, nylon, HIPS, PC **Min layer height** 20 microns **Nozzle diameter** 0.3/0.8mm **Software** AutoMaker (PC/Mac/Linux)  
**Dimensions** 370x340x 240mm  
**Price** R17 500 (import) / cel-robox.com



## On-screen dream

The ultra-user-friendly graphical dashboard lets you interact directly with parts of the machine rather than digging through menus just to nudge the extruder out of the way.



## Model behaviour

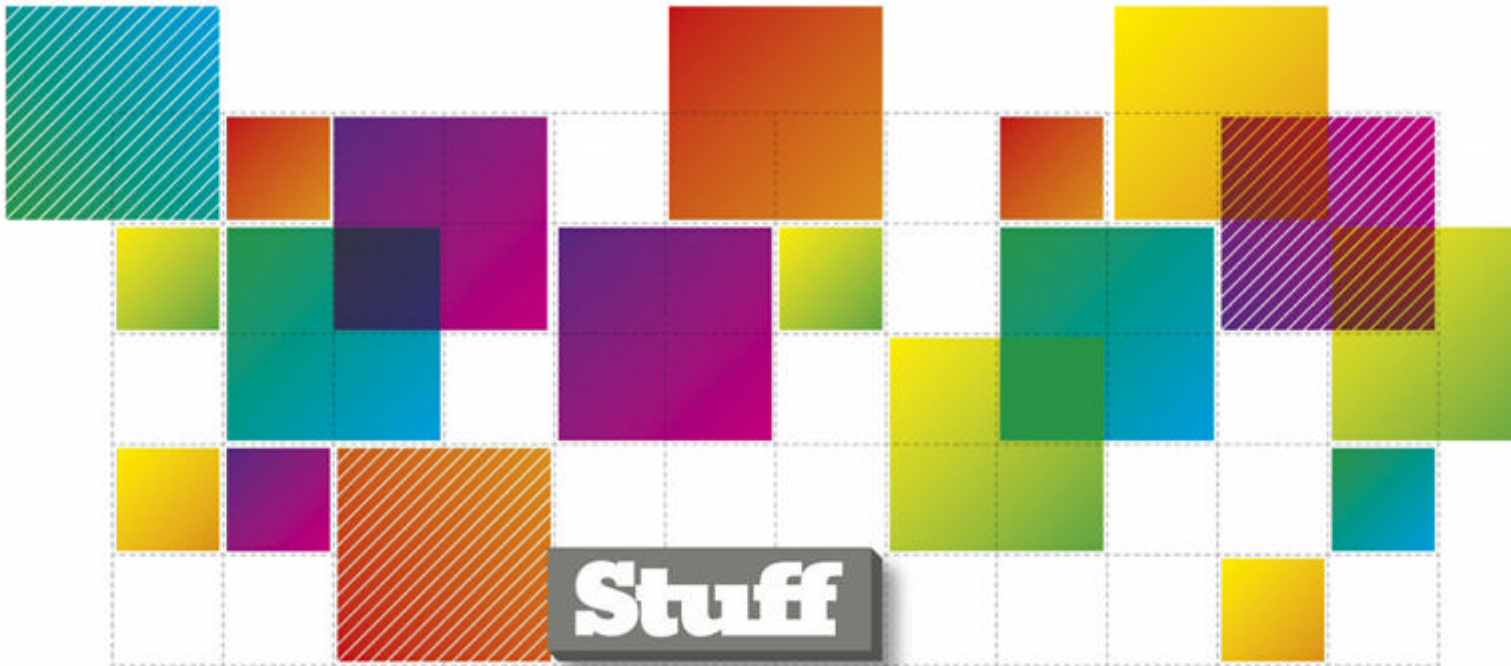
Our best results turned out to be beautifully precise, with parts that could be clipped together straight after printing. However, we didn't see much of the speed advantage offered by the dual-nozzle system.

**STUFF SAYS** The Robox proves 3D printing doesn't have to be a dark art ★★★★★

**Building the future with 3D printing... at last**

3D printing has broken our heart before, but every time we hope it'll be different. And with the Robox, it feels like it is. 3D printing needs to offer a straight-out-of-the-box printing experience, and consistency rather than big promises and failed prints. There will always be issues related to unsuitable model files, and no relationship is without its hiccups, but thanks to the Robox we think we're ready to trust a 3D printer again.





Stuff

# PROJECTS



MAKE. DO. UPGRADE.



**p90**  
**BETA YOURSELF**  
**ELECTRONIC**  
**MUSIC**

Well, who needs actual instruments?



**p92**  
**PLAYLIST**  
**TECHU-**  
**MENTARIES**

Watch away a few hours with top techy films



**p94**  
**SUPER GEEK:**  
**MACRO**  
**PHOTOGRAPHY**

Tiny but still awesome: take a closer look



**p96**  
**INSTANT**  
**UPGRADES**  
**CYCLOCROSS**

Carry your bike through mud... for fun

BETA  
YOUR  
SELF

# ELECTRONIC MUSIC

**Bored of stale guitar riffs and generic indie? DJ Gavin Herlihy reveals how to turn your laptop into your favourite musical instrument**

## THE BASICS

### ■ Choose your station.

A Digital Audio Workstation (DAW) is the production software you'll use to create your electronic music. Each one has different attributes so do some research. Garageband, Ableton Live and the newer Bitwig are the most beginner-friendly.

■ **Start with a beat.** The most common way to start a track is hammering out a beat with a Music Production Centre (MPC) or a drum machine like Maschine (native-instruments.com). The latter helps you build rhythm loops without a mouse slowing your flow.



■ **Borrow sounds.** Bringing in a new element from the outside world can open doors to your track's direction, so download lots of samples. Bear in mind that the better the audio source, the better your tracks will sound, so get digging through your vinyl collection rather than ripping MP3s from YouTube.

■ **Warm up.** Begin each session by jamming along to your favourite tracks. Playing along to the different elements will help warm your brain up to the task ahead.

■ **Learn from the masters.** Compile a list of tracks you wish you had made. Work out what makes them tick so you can apply these features yourself.

■ **Be minimalist.** Most DAWs contain a mind-boggling array of applications and effects, so keep it simple to begin with: just pick a monophonic synth, a polyphonic synth, a beat-making plug-in and a sampler so you can learn them inside-out.



Region: MIDI Thru

Groups

Track: Lead Vocal A

Setting

Volume Mix

EQ

Channel EQ

Compressor

Reverb

Delay

Distortion

Limit

Send

Return

Head

Head

+0.2

0.0

V

M

Output 1-2

Lead Vocal A

Output 1-2

## MASCHINE STUDIO



## NEXT STEPS

■ **Avoid clutter.** Don't accumulate lots of plug-ins. They slow down your computer and your learning progress. Instead of flicking endlessly through presets, learn to create the sounds in your head by watching YouTube tutorials of your favourite plug-ins.

■ **Multi-task.** Rather than fighting it out for weeks trying to create one song, try working on two or three at once. Rotating through your projects will give you a sense of perspective for what's working and what's not.





## LEVEL UP WITH...



### MACPROVIDEO

from \$44/month /  
[macprovideo.com](http://macprovideo.com)

Before YouTube and the rise of the video tutorial, learning to produce music was a mind-numbingly difficult process made insufferable by manuals. These days you don't need to read a book as thick as your forehead when there are sites like this devoted to advancing your knowledge.

## dubspot

### DUBSPOT

Free / [dubspot.com](http://dubspot.com)

A massive internet hub for music production, Dubspot is one of the world's most trusted online schools for learning how to produce tracks. Crammed full of articles, interviews with professionals and video tutorials, it focuses on the real nitty gritty of electronic music production, spanning a wide spectrum of DAWs and equipment.



### SOUND ON SOUND

\$7.00 per issue /  
[soundonsound.com](http://soundonsound.com)

It might be a touch on the serious side, but this music tech mag (founded in the mid-'80s) remains the best destination for in-depth kit reviews. All articles are archived online, and the tablet version for iOS and Android lets you listen to 'before' and 'after' mixes to help hone your musical ear.



## STUDIO BOOSTERS

■ **Get MIDI.** If you want to stick with software instruments, use a good MIDI controller to record automation changes. This will liven up your compositions.

■ **Go analogue.** Analogue synthesizers have a denser sound than digital, and jamming away on hardware often breaks up the monotony of staring at screens and clicking mice.

■ **Use a sequencer or arpeggiator.** These throw random MIDI patterns at your synths and help you play with your filters until something jumps out at you.



## MIXING TRICKS

■ **Take the bus.** Mix bus channels help you tweak levels and add effects to groups of tracks, helping you mesh them together for your stereo master.

■ **Turn everything down to turn it up.** High frequency elements can often overpower a mix, so start low and turn them up carefully one at a time.

■ **Use channel EQ.** High-pass EQ settings shave the lower end off individual channels to create space in a mix. Aside from kick and bass, most instruments don't need those potentially muddying low frequencies.



## FINISHING TOUCHES

■ **Take a break.** When you have a rough version finished, leave your track alone for a bit. When you return you'll know instantly if it's finished or not.

■ **Invest in good monitors.** Pull them away from the wall and use acoustic foam and bass traps to improve the acoustics.

■ **Become a master.** Final mastering is best left to the pros, but if you need a rough master, apply a multi-band compressor, a stereo widening tool — last in the chain — a limiter to the master channel before bouncing.





# PLAYLIST

## TECHUMENTARIES

For a while, documentaries were seen as a bit stuffy, voyeuristic or condescending. But now we're falling back in love, with the help of our favourite streaming sites

### Finding Vivian Maier

During her lifetime, Vivian Maier was an unremarkable nanny from New York. But in 2007 a photo collector bought a box of undeveloped negatives that would reveal her as one of the greatest street photographers of the 20th century. Uncover the mystery of Maier's Rolleiflex.

Amazon



### Terms and Conditions May Apply

#### Terms And Conditions May Apply

A pre-Snowden klaxon about our shrinking privacy, this dives into the small print of tech companies' user agreements to show how they're taking us on a fast track to Orwellian scrutiny. Echoes of *Minority Report* still put a chill down the spine.

Netflix



#### I Am Street Fighter

Made for *Street Fighter*'s 25th anniversary, this details the classic game's history via the mildly terrifying Evo Championships. There's a lot of hyperbole but, as one talking head puts it, the game is essentially "a really well made rock-scissors-paper".

YouTube



#### We Are Legion

This is a must-see for anyone with the slightest interest in modern history. Although ostensibly a film about the Anonymous movement, it touches on many elements of internet culture (memes, trolling, geek humour) and is entertaining, if a tad one-sided.

Netflix



#### An Alternative Reality: The Football Manager Documentary

Part love letter to the series, part advert for *Football Manager 2015*, this fans-only look at the world's most addictive spreadsheet has enough nerdy nostalgia to make any armchair tactician get playing.

iTunes, Blinkbox, Google Play



#### Indie Game: The Movie

Following the preparation of *Super Meat Boy*, this doc reveals that being your own boss isn't all it's cracked up to be, especially in the often solitary world of indie games. Even if the film's human subjects aren't always likeable, their games are the stars.

Netflix, Steam, Vimeo, iTunes



#### Objectified

Every object you see around you started life in someone's mind. Specifically the imaginations of Dieter Rams, Jony Ive and Marc Newson, who explain the philosophy behind 'mundane' manufactured products. Slick and serious: watch as a Gary Hustwit double bill with *Helvetica*.

Amazon







### Tim's Vermeer

Tech pioneer Tim Jenison has zero experience with a brush, but by remaking the 'camera obscura' he believes was used by Vermeer he finds he can create masterful paintings. What follows is a fascinating study in single-minded dedication.

**Amazon Prime  
Instant Video**



### The Camera That Changed The World

Real life didn't exist until the portable film camera came in 1960, kicking open the doors of spontaneity and taking us from Mr Cholmondley-Warner to *Don't Look Back* in one step. Predictably, the US networks hated this new unstaged reality and refused to broadcast any of it.

**Vimeo**



### Print The Legend

Not a fan of extruder nozzles or plastic ornaments? Don't worry, this doc ignores 3D printing's banalities and follows the journeys of Makerbot and Formlabs as they cope with the stresses of huge early growth. It's so entertaining you'll forgive it for avoiding certain questions.

**Netflix**



### The Internet's Own Boy

This is the story of programming prodigy Aaron Swartz, whose activism and subsequent arrest led to his suicide, aged 26, in 2013. The Reddit co-founder campaigned for greater access to public information. It's inspiring despite its disturbing view of the justice system.

**YouTube**

## SCHOOL OF EASY DOCS

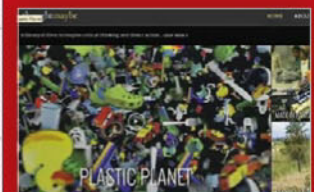
No more techumentaries left in the fridge? Time to raid these emergency stashes of free ones...



### DOCUMENTARY HEAVEN

Rather than hosting films itself, this site collates all the free docs available on sites like YouTube and Vimeo and puts them all in one searchable, weekend-devouring place. Its handy 'Top 100' is the place to get started.

**documentaryheaven.com**



### THOUGHT MAYBE

Adam Curtis fan? This independent archive hosts all of his compelling collage-docs, along with a huge library of films on 'challenging modern society, globalisation and dominant culture.' No, that doesn't include *Armageddon*.

**thoughtmaybe.com**



### INTERNET ARCHIVE

If you really want to disappear down the rabbit-hole, check out this vast chamber of retro shows. Its 'computers and technology' section has almost 100,000 videos alone. Someone should make a film about it...

**archive.org**

SUPER  
GEEK

# MACRO PHOTOGRAPHY

**Marc McLaren explains why there's beauty to be found in the smallest of details, from the complex exoskeleton of a grasshopper to the water droplets on a wing mirror**

**W**hen I was eight I was given a microscope for Christmas – and so began a fascination with nature's hidden details.

I would examine leaves and bugs and bits of food, thrilling at the intricacy; but with only my memory to preserve the images, the details faded. It wasn't until I discovered macro photography 25 years later that I was able to record and share the beautiful world of the very small. And that's when I got really obsessed...

So what is macro photography? Well, officially, it means any shot

taken with a 1:1 magnification ratio – meaning your subject will be depicted on the camera's sensor at its actual size. But that's a pretty dry way of saying that it's the art of photographing the minuscule. And an art it very much is. While in some ways it's the most scientific of photographic pursuits, lacking the spontaneity of street shooting or the anthropocentric artistry of portraiture, if you can't see the beauty in nature, you're frankly a bit of a lost cause.

For me, macro's appeal is threefold. First, there's the

scientific buzz to be had from delving into a world that few people notice, and capturing, for instance, the crystalline structure of a snowflake. No, you're not making any real discoveries, and no, you're not even the first to take a photo of that kind. But doing it yourself is still a hell of a lot of fun.

Second, there's a serenity in the shooting process itself. You have to be calm, methodical and very patient with macro – it's all about getting your flashes and tripods and other gear just so, then tweaking your focus until

it's spot-on. It's the photographic equivalent of model building or tinkering with cars – and every bit as satisfying when it works.

But most importantly, macro can be breathtakingly beautiful. That shouldn't be a surprise – nature's been creating jaw-dropping art for far longer than humanity, painting pictures with symmetry and fractals and long strings of DNA. Macro merely magnifies this natural art so that human eyes can appreciate it. Don't believe me? Just grab a camera and start shooting. You'll soon find it.

## TINY TIPS

### ■ STOP IT DOWN

Depth of field is minimal at the macro level, so unless you're going for an arty, abstract shot you'll need to select as narrow an aperture as possible. About f/16 usually does the trick.

### ■ KEEP STILL

You're often going to be shooting at slow shutter speeds in order to cope with the narrow aperture, so a tripod is nigh-on essential.

### ■ FLASH IT AROUND

The alternative to using a tripod is to use a flash. What you really want is a ring flash: these clip on to your lens to provide a soft, consistent light source. Pricey, though.

### ■ STACK IT UP

Focus stacking can work well: you shoot dozens of photos of the same subject from the same position but with a slightly different focal point each time. You then combine the images in processing software and end up with one super-sharp macro shot.



THE  
GATEWAY  
DRUG

## OLLOCLIP MACRO 3-IN-1 LENS KIT

Stick an OlloClip on the back of a smartphone and you'll soon be hooked on macro. As the name suggests, this kit contains three lenses – 7x, 14x and 21x – plus a hood which helps the phone to grab focus. And the results are really quite good: the magnification is enough to get an instantly new perspective on the world, for instance highlighting the individual ink dots that make up coloured paper. The iPhone's sensor isn't big enough for super-sharp images once you zoom into your shot, but it's a cheap, easy way to dip your toes into the shallow macro waters.

**R1000 / ormsdirect.co.za**



THE  
AMATEUR'S  
CHOICE

## TAMRON SP F/2.8 90MM DI VC USD MACRO LENS

The easiest way to get consistently great macro shots is to buy a DSLR camera and a dedicated macro lens such as this Tamron. Its 90mm focal length will enable you to get a close shot while standing far enough back that you won't freak out your skittish subject matter, while the built-in stabilisation is a real boon if you're shooting handheld. There's a focus limiter to reduce the chance of the lens hunting around, though it snaps on pretty quickly anyway, and the big rubber grip is great for manual focus. Plus it's available in Canon, Nikon and Sony mounts.

**R8000 / ormsdirect.co.za**





THE  
EXPERT'S  
TOOL



### CANON MP-E 65MM F2.8 1-5X MACRO LENS

While a lens such as the Tamron will take you to a 1:1 magnification ratio, the Canon MP-E takes things a step further – or rather five steps further, offering a massive 5:1 ratio. So while a standard lens might let you make out the compound eye of a bee, the MP-E will go in close enough that you can count how many facets each eye has. Not that we can think of any reason why you'd want to do that. The downside? It's a tricky, fiddly thing to get right: you'll need a tripod, a flash and lots of patience. But arm yourself with those tools and you'll have the keys to a new world.

R12000 / [ormsdirect.co.za](http://ormsdirect.co.za)

## BUDGET MACRO



### REVERSE MOUNTING RINGS

These adaptors let you mount a lens on a DSLR camera backwards. The lens now acts as a magnifier in the way that a macro lens does, and the wider the lens, the greater the effect. Trust us, an 18mm lens reverse-mounted on a 200mm makes for crazy magnification. The downsides: no autofocus or aperture control, and your lens is open to the elements.



### MACRO CLOSE-UP FILTERS

These work in the same way as UV or polarising filters, screwing on to the front of your lens and helping it to focus more closely; stack several together to increase the effect. Use them on a telephoto lens and you'll reach that magic 1:1 ratio. You retain exposure and focusing control, but images are often softer than they would be with a macro lens.



### MACRO EXTENSION TUBES

These hollow tubes sit between the camera and the lens and make the lens behave like a macro. The advantage is that you shouldn't see any loss in image quality. However, they reduce the lenses' effective aperture by a few stops, which will increase the amount of light you need, and while connected you won't be able to focus on distant objects.

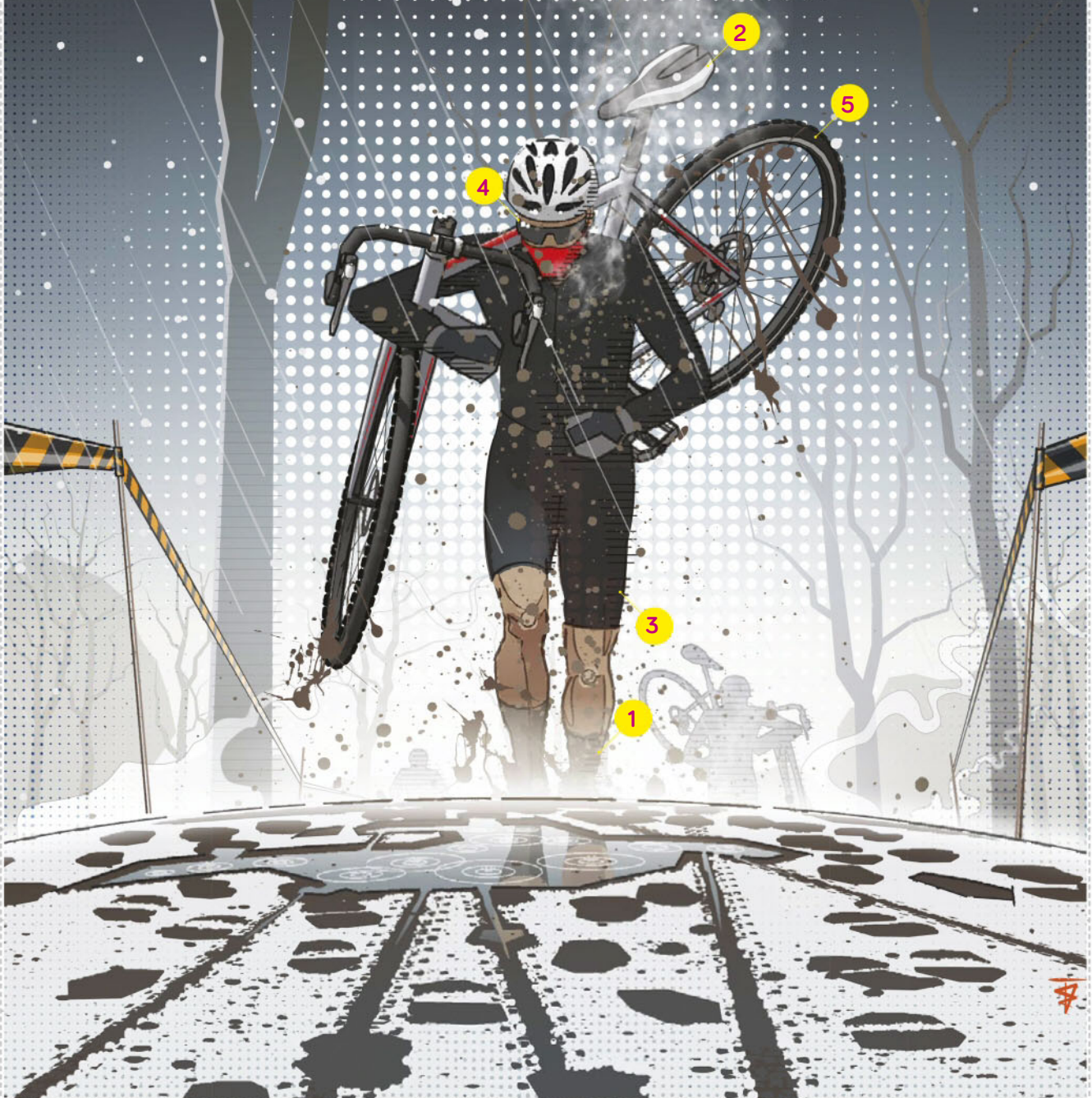


6

## INSTANT UPGRADES

## CYCLOCROSS

Dip your muddy toes into cycling's favourite winter sport. Cyclocross is fast-paced short-course racing... and it's even more fun with this kit in your armoury







### 1 SEALSKINZ MID LENGTH SEA EAGLE

Being dry is as much about improving your performance as it is about comfort. Sealskinz socks have top-secret patented technology, which give them great breathability while being completely waterproof. The Sea Eagle has a tongue-in-cheek design that pokes fun at stuffy golfers, with a comfortable fit thanks to their elasticated ankle and insteps. Save money on expensive shoes and invest in socks, because trench foot isn't a great post-race hangover.

**R560 (import) / [sealskinz.com](http://sealskinz.com)**



### 2 BOARDMAN CX TEAM

The CX bikes are the love-child of road and off-road, although cyclocross racing was around long before mountain biking. A couple of years ago the UCI relaxed the rules and cable-activated disc brakes began to appear. The purists will moan about weight, but when racing in muddy conditions being able to stop is pretty handy. After all, these are little more than road bikes with fat tyres. The disc-equipped Boardman CX Team is stiff, light and responsive, and great for the first-time racer.

**R15 700 / [boardmanbikes.com](http://boardmanbikes.com)**



### 3 ENDURA THERMOLITE WINTER BIBSHORTS

If tyres are important as contact points with the ground, the right shorts are equally important contacts with your bike. During a race you'll be on and off, riding and jumping, so a bibbed short will stay tight, won't chafe and will keep you warm. Endura uses 'flat lock' stitching to avoid rubbing and its gel insert with an antibacterial finish will ensure you won't be walking like John Wayne the morning after.

**R1 220 / [chainreactioncycles.com](http://chainreactioncycles.com)**



### 4 OAKLEY RADARLOCK

While chasing down that elusive leader of the pack, the last thing you need is a big dollop of mud in your eye. The Radarlocks have a hydrophobic treatment applied to their clear lenses so muddy water will run straight off, giving you a clear, unobstructed view of the backside of the rider you're chasing. The lenses also darken automatically in bright conditions, making them suitable for virtually any weather conditions. Think of them as a lighter alternative to mudguards for a sport where weight is everything.

**R2 650 / [cwcycles.co.za](http://cwcycles.co.za)**



### 5 CONTINENTAL CYCLO-X KING

It's easy to forget that tyres are the only thing connecting you to terra firma. You need to make sure your tyres can clear mud, grip and roll well. The Cyclo-X King, as the name suggests, does all three. It has a wide tread pattern for better mud dispersal, while providing larger knobs (no sniggering) for less rolling resistance on harder ground and improved 'bite'. They meet UCI regulations for width too, to save you from any humiliating disqualification issues.

**R800 / [wiggle.co.uk](http://wiggle.co.uk)**



### 6 GARMIN EDGE SERIES 500

Your race will last just over an hour – and if you have time to look at a computer you're not working hard enough. But using a data logger to show how you performed, like just how badly you tailed off on the last lap, will give you valuable training feedback. The Garmin Edge 500 links to both heart-rate and cadence monitors to give you telematics worthy of an F1 team, while the handy 'Courses' mode lets you compare rides over the same route.

**R3 700 / [garminonline.co.za](http://garminonline.co.za)**

## CYCLOCROSS ESSENTIALS



### PRACTISE DISMOUNTS

A cyclocross race can be won or lost on how good your dismounts and re-mounts are. It can be a little bit of a leap of faith at first, but practice unclipping, jumping off the bike, shouldering it and running for a bit and then jumping back on. This is how you get the 'feel' of the bike and it will pay off in a race situation.



### STAY WARM

Embrocation will keep your muscles warm before the race. Cold causes cramp and the professionals swear by a combination of gels and gentle spinning on a turbo-trainer before the race. You'll have two-min and one-min warnings to get yourself prepped at the start line, so get your race head on early.



### RESEARCH RACES

Never heard of it? Cyclocross is huge overseas but it's just starting, comparatively speaking, here in South Africa. So you're going to have to do your homework. Last year we had an unofficial Cyclocross Champs event and most others (both of them) are confined to Gauteng but the compulsion to get dirty and scraped is spreading. You can get in on the ground floor.





# 5-MINUTE HACKS

## IF NOTHING ELSE, AT LEAST...

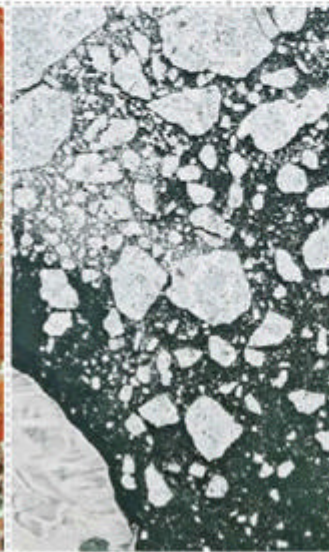
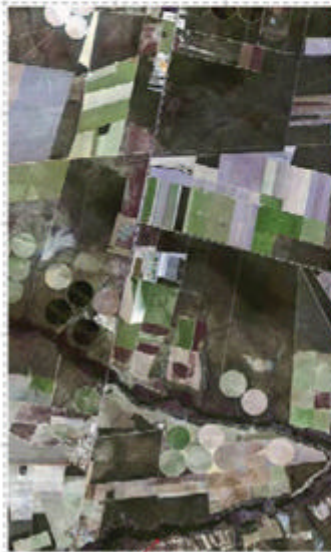
### 1 LIVEN UP YOUR WALLPAPERS

Live wallpapers are nothing new, but what if you'd like to turn any GIF or cinemagraph into your smartphone's new homescreen background?

**If you're an Android user,** download AnimGif Live Wallpaper 2 (R30, play.google.com). Load your favourite GIFs onto your SD card, open them in the app's settings and select 'image fitting mode'.

**Options for iPhones** are a bit more limited. Though we don't recommend jail-breaking your device, GIFPaper (cydia.saurik.com) is for those who have already taken the leap.

**Prefer your wallpapers** to be stunning—but-static satellite imagery? aerialwallpapers.tumblr.com has a fine selection of resized snaps from the likes of NASA and Airbus.



[ Pictures geo-airbusds.com, flickr.com/nasa2explore ]

1

### 2 TURN A CHEAP LAMP INTO AN IPAD MOUNT

This simple lamp moonlights as an outstandingly lazy bedside accessory, with these simple tweaks from ikeahackers.net — see bit.ly/ikeaipadlamp

**Gather the three things** you'll need: Ikea's Tiertal Work Lamp (R150, ikea.com), a mini camera tripod, and a tablet holder with a tripod mount.

**Remove the lamp's head** and the swivel head from your tripod. Now add a machine screw to the lamp's plastic collar (which previously held the pinion) and install the knob.

**Insert the machine screw** into the base of your tripod and tighten. Finally, attach your tablet holder to the tripod head, and recline as if you're in business class.

### 3 MASTER YOUR GMAIL

Pimp your overflowing inbox with these upgrades:

#### Need a backup of your Gmail?

Use Google Takeout (google.com/settings/takeout). Or to create a searchable local archive, download Postbox (postbox-inc.com) or Thunderbird (mozilla.org).

#### Just committed a 'reply all' clanger?

It's too late, unless you've been into the 'Labs' section in Gmail's settings and enabled 'Undo Send'. It plucks recently sent emails and brings them safely home.

#### If you find yourself typing out

the same messages in a kind of Gmail Groundhog Day, enable 'Canned Responses'. You'll now get the option to add tailored stock responses in the 'new message' window.

3



### TUNE IN NEXT MONTH TO...

● Discover the best techsperience days ● Go on a voyage of microscopy ● Become a master of drones





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# Stuff

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# GADGET DOCTOR



## ALWAYS ON CALL

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tellus@stuff.co.za

## MAIL OF THE MONTH

### Q NOW ON THE BIG SCREEN

I am a keen amateur photographer and have been snapping away on a recent trip abroad. What I have come to realise is that being an amateur means that my photos often require a little retouching on Lightroom/Photoshop. Now my problem is this, the screen on my laptop is not really up to scratch when it comes to detecting fine details on photos that I've taken and I know that newer laptops have much higher resolution screens, but I'm not all that keen to replace my entire laptop. Are there any decent desktop displays that you could recommend for the job. Not

looking to break the bank, but looking to pay around R3K for a decent screen.

James

**A** Thanks very much for your mail. If you're happy with your laptop then buying an external monitor is the way to go. The things to check before you do, however, are whether or not the laptop's graphics card can handle the resolution of the screen you intend to buy, and what connection options (VGA/D-Sub, DVI, HDMI or DisplayPort) your laptop offers. Most laptops support HD (1920x1080) output, but older (or low-end) laptops may not support higher than HD output. There are plenty of options available to you.

to the big TV downstairs, but I keep having to disconnect it and lug it upstairs every time the kids want to watch some animated nonsense or the other half needs her *Isidingo* fix. Any solutions that don't require buying a very long HDMI cable?

Gavin

**A** This one's nice and easy. Part with R1500 for the Sony PlayStation TV (takealot.com) and it'll let you stream and play games on another TV in your house over your home network, without the need to cart around the console itself. Just plug it into another TV and away you go. You can also play compatible PS Vita and PS One games on it.

It beams notifications to your wrist, along with the other clever tricks that come with Android Wear such as voice search. It's also the first Android Wear watch with in-built GPS. Coupled with its ability to store music, you can take some Bluetooth headphones on a run and track your route while your phone takes a nap.



### Q DRONING ON

I'm an amateur video maker looking to snap up a fancy drone for sweeping aerial shots. I don't mind forking out the cash as long as I'm getting something decent. What would you recommend?

Ollie

**A** The latest DJI Inspire 1 is easily the best choice. It's got a 360° rotating 4K camera for starters, and its landing

arms are able to lift out of the way during flight for a completely unobstructed view. You can even snap up a second controller for just controlling the camera while another person focuses on flying. R54 000 (actiongear.co.za) will net you the drone and two controllers.

### Q TV WARS

I've got a bit of a gaming problem. The PS4 is hooked up

### Q WATCH SHALL I DO?

There are a few decent smartwatches out there now, but I'm not sure which one to get. I've got an Android phone and I want to use the watch to delete notifications. I want to use it for running too. Any ideas?

Sarah

**A** Sarah, your best bet is the Sony SmartWatch 3 (R3 000, store.orange.com/za).

**Congratulations to our two  
HTC One competition winners:**

Atlegang Oratile and Michael Arendse

**Congratulations to our three  
LG G3 competition winners:**

Hasoo Gopal, K Keshavlall, S Setshaba

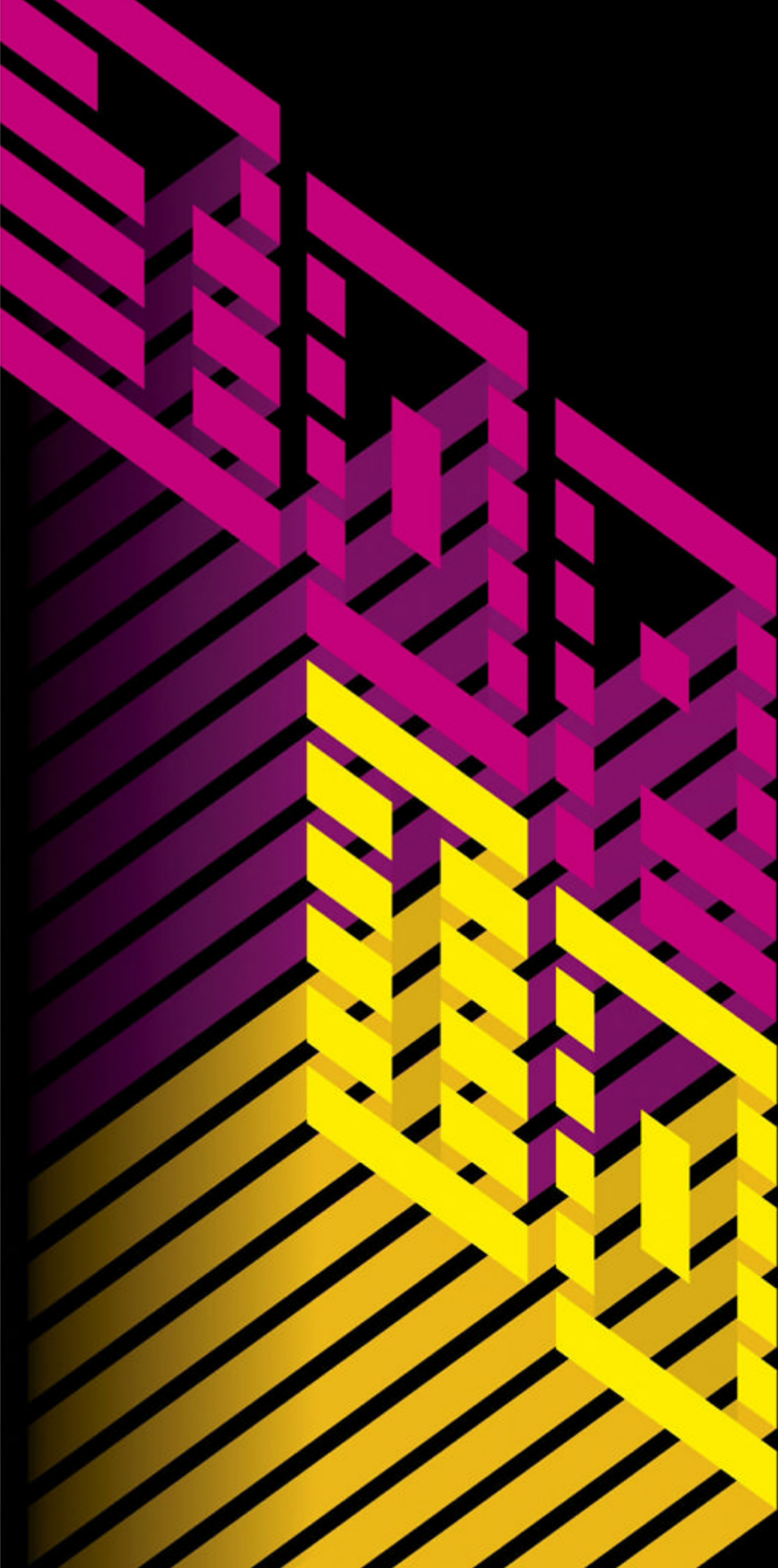
# WIN

The best letter wins the  
**KING OF SEDUCTION,**  
valued at R3 560

A whirlwind of elements unleashed in an essence of powerful contrasts. Intense and energetic, while fresh and elegant. A sensual dance, strong yet delicate, that will take you to the kingdom of seduction.







# Stuff

## TOP TEN

### OF EVERYTHING

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For reviews of products featured in the top 10s, visit [stuff.co.za](http://stuff.co.za)

Prices quoted are the best available at the time of printing

HOT  
BUY

1

**Motorola Moto X**

After the Moto X, you won't want to go back to any other Android. It's smart, fast and beautifully crafted. Motorola's software works together seamlessly to make your life that bit easier and its brilliant Moto Maker means a personalised top-spec smartphone like never before. The Motorola feels like it's built for everyone, something made even sweeter by the price. It's no budget Moto G, but it is a reasonable R8 100 for the 32GB model. Who could say no to that?

**STUFF SAYS**

The first truly gorgeous, seriously-specced Android phone that puts you in control – it's brilliant

R8 100 (import) ★★★★★

2

**LG G3**

LG surprises us again. There's barely a single thing wrong with the G3... and so, so much that's right. Upgrades range from sleeker back buttons to the bigger, better 2K screen and laser-assisted camera. And it still lasts 15 hours. How do they do it?

R9 000

★★★★★

3

**Apple iPhone 6**

With its slim, deeply attractive build and software overhaul, the iPhone 6 is the freshest-feeling iPhone in years. Its larger screen is big enough to be a useful improvement, with gorgeous colours, and this is Apple's best ever battery.

from  
R9 900

★★★★★

4

**Sony Xperia Z3 Compact**

This is, without a shadow of a doubt, the best sub-5in/12.7cm Android phone around. The power of a full-size flagship, an excellent camera and an impressive battery life are all crammed into a device that's a pleasure to use no matter the size of your digits.

R6 700

★★★★★

**BEST FOR**  
DAINTY HANDS

5

**HTC One M8**

Only just topped by the new LG, HTC's flagship phone has enough power to take it to the top of the AnTuTu benchmarks. It's a beaut to look at and to use, and it's even got a whole load of Lytro-style post-snap refocus features for photographic fun.

R7 600

★★★★★

**BEST FOR**  
RAW POWER

6

**Samsung Galaxy Note 4**

Samsung was first at the phablet game, and with the Note 4 it's still the best. The ace camera, Multi Window feature and pressure-sensitive S Pen make proper use of the extra screen real estate. Plus, it has the longest battery life of any 2K phone we've tested.

R11 500

★★★★★

7

**LG G2**

Only just pipped by the new HTC. Its 5.2in/12.7cm screen is razor-sharp, its quad-core Snapdragon 800 processor handles demanding tasks with ease and its 13MP camera takes amazing photos. The new G Pro 2 is bigger, but could it possibly be better?

R8 000

★★★★★

**BEST FOR**  
SUPERPHONE  
VALUE

8

**Samsung Galaxy S5**

Big, bold and stuffed with tech, the Galaxy S5 is a bona fide superphone that will delight Samsung fans, although it has some very stiff competition. It has a faster processor, a slightly bigger screen and a more solid (if not quite stylish) feel than the S4.

R9 800

★★★★★

**BEST FOR**  
FUN  
FEATURES

9

**Sony Xperia Z3**

The refined Xperia Z3 is the phone the Z2 should have been and every bit as good as that sounds. It's sleeker and easier to hold, but with the same stunning screen, camera and hi-res audio. Not to mention the incredible battery life. PS4 Remote Play is due soon.

R10 000

★★★★★

10

**Apple iPhone 5s**

A curious blend of tried-and-tested – 4in/10.2cm screen, design, huge cost – with new-and-exciting features like a 64-bit processor, fingerprint-sensing home button and iOS 7. What it adds up to is an easy purchase for most... but we're ready for iPhone 6.

from  
R10 000

★★★★★

**BEST FOR**  
APPLE FANS

● Prices quoted are for handset only unless otherwise stated

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|                            |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                            |
|----------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HOT BUY</b><br><b>1</b> |    | <b>Apple MacBook Air (2014)</b><br>The 2014 MacBook Air update means, once again, our favourite old laptop is now our favourite new laptop. Nothing's changed on the outside, and under the skin there's just a slight processor boost from 1.3GHz to 1.4GHz, but combined with a price cut on each model we're still happy with that. The very top model, which comes with a 256GB SSD, is now just under a grand, too. Stay tuned for our full review of the lightly tweaked MacBook Airs on stuff.co.za | <b>STUFF SAYS</b><br>The 2014 Air is powerful, fast, sexy and has bags of stamina. If it was any better, we'd think we were dreaming<br>from R12 500 ★★★★★ |
| <b>2</b>                   |    | <b>Apple MacBook Pro with Retina Display 13in (2014)</b><br>Choosing between Air and Pro is getting harder. Both now run on Haswell chips, but the Pro is faster, with a 2014 processor boost. There's a 4K-capable Thunderbolt 2 port, and then that Retina screen, one of the most gorgeous you'll see. Tough call.                                                                                                                                                                                      | from R21 500 ★★★★★<br><b>BEST FOR EVERYTHING BAR THE PRICE</b>                                                                                             |
| <b>NEW</b><br><b>3</b>     |    | <b>Microsoft Surface Pro 3</b><br>The fact that it's the only device to feature in two of our Top Tens is a testament to the Surface Pro's versatility: it's a strong tablet, but its full-fat operating system and powerful innards mean it's also a worthy adversary to Ultrabooks and MacBooks.                                                                                                                                                                                                         | from R18 500 ★★★★★<br><b>BEST FOR WORKING ANYWHERE</b>                                                                                                     |
| <b>4</b>                   |    | <b>Lenovo X1 Carbon</b><br>This is it, the best Windows machine we've had occasion to caress in a long, long time. The Quad HD does little to lessen our esteem. So why so low down the list? Gimmicky voice and gesture control, for one, and that multi-function strip could use a little work.                                                                                                                                                                                                          | R33 000 ★★★★★<br><b>BEST FOR SOOTHING YOUR EYEBALLS</b>                                                                                                    |
| <b>5</b>                   |    | <b>HP Envy 6 Sleekbook</b><br>AMD Trinity processors power this Ultrabook alternative, making it cheaper and more battery-filled. The Envy 6 has a quality metal lid and rubberised base, 15.6in/39.6cm screen and its 4GB RAM boots the 500GB hard drive faster than a similar Intel Core i3.                                                                                                                                                                                                             | R10000 ★★★★★                                                                                                                                               |
| <b>6</b>                   |   | <b>Asus Zenbook UX302</b><br>Asus has done a wonderful job of creating an ultra-slim laptop that's as far removed from Apple's influence as possible, while maintaining a stylish and unique aesthetic. The 13.3in display is razor-sharp and colourful – this is our favourite Ultrabook.                                                                                                                                                                                                                 | R20 500 ★★★★★☆                                                                                                                                             |
| <b>7</b>                   |  | <b>Lenovo Yoga Pro 3</b><br>The third entry in the Yoga Pro line refines the laptop/tablet hybrid design with a power-sipping new Intel Core M processor plus slimmness and style to make even the MacBook Air look worried. And you can stand it up like a tent. If you want.                                                                                                                                                                                                                             | Rtba ★★★★★☆                                                                                                                                                |
| <b>8</b>                   |  | <b>Samsung Series 7 Chronos</b><br>More of a Win 8 than Mac type? This brushed-aluminium MacBook Pro alternative has plenty of power (Core i7 brain, AMD Radeon HD6750M graphics), a 15.6in/39.6cm full HD screen and a 6hr battery. It's not the most portable at 2.4kg, but we can live with that.                                                                                                                                                                                                       | from R15 000 ★★★★★☆                                                                                                                                        |
| <b>9</b>                   |  | <b>Acer Aspire S7</b><br>The Aspire S7 is almost the perfect Ultrabook – it matches the MacBook Air for weight, beats it for slimmness by 6mm, and has a gorgeous 1920x1080 touch-friendly screen. Only its battery, which lasted a mere 5hrs on test, prevents it getting that fifth star.                                                                                                                                                                                                                | R25 000 ★★★★★☆                                                                                                                                             |
| <b>NEW</b><br><b>10</b>    |  | <b>Acer Aspire Switch 10</b><br>A Windows laptop and 10.1-inch tablet for just R5 500? This seriously flexible bundle is Acer's best hybrid yet. Only a bit heavier than a MacBook Air, the square-edged ergonomics and battery life are issues, but as a whole package it makes a lot of sense.                                                                                                                                                                                                           | R5 500 ★★★★★☆                                                                                                                                              |



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|-------------------|----|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| HOT<br>BUY<br>NEW | 1  |    | <b>Apple iPad Air 2</b><br>The iPad Air didn't really need to be thinner, but that doesn't mean 6.1mm isn't mighty impressive. This combines with reassuring weight and impeccable build quality to make this the most desirable tab on the planet. While the display is the same Retina resolution as before, clever screen tech brings the pixels closer to the surface, and the whole experience is even faster than before thanks to the new A8X chip. Basically it's the best tablet in the world made even better. | <b>STUFF SAYS</b><br>Thinner, lighter and mightier: Apple's iron-fisted reign at the top of the tablet charts continues unabated<br>from R6 700 ★★★★★ |
|                   | 2  |    | <b>Apple iPad Mini 2 With Retina Display</b><br>The iPad Mini 3 is out now but all it adds is Touch ID. The good news is that the Mini 2 is now down to R3 300, which is frankly bargain-tastic. That's why the 'old' model stays in our Top 10 – if you're after a mini-tablet of real quality, your choice has just got easier.                                                                                                                                                                                        | from R3 300 ★★★★★<br><b>BEST FOR CREATIVITY ON THE MOVE</b>                                                                                           |
|                   | 3  |    | <b>Samsung Galaxy Tab S 10.5</b><br>Samsung has blessed the Galaxy Tab with one of the best tablet screens we've ever laid eyes on, plus an impressive camera and some incredible stamina – but there are performance niggles and Apple's tablet app selection is still far superior.                                                                                                                                                                                                                                    | R10 500 ★★★★★<br><b>BEST FOR MAGAZINES AND MOVIES</b>                                                                                                 |
|                   | 4  |    | <b>Samsung Galaxy Tab S 8.4</b><br>Superb screen, unique features... really, there's very little that's missing here. For us the iPad Mini beats the Samsung by a whisker for its design, performance and wider selection of optimised apps, but against other Android tabs it's a winner.                                                                                                                                                                                                                               | R8 700 ★★★★★                                                                                                                                          |
| NEW               | 5  |    | <b>Google Nexus 9</b><br>The design isn't as pristine, but this is a real Android contender to rival the iPads. You get the new Android 5.0 Lollipop software, bags of power and a super-sharp display. With 12 hours of video play and two front-facing speakers, it'll be a great film buddy.                                                                                                                                                                                                                          | R6 100 ★★★★★                                                                                                                                          |
| UPDATE            | 6  |    | <b>Microsoft Surface Pro 3</b><br>At last, Microsoft has delivered on the promise of the tablet-cum-laptop hybrid. It proves there's space in the world for a design that's more productive than an iPad or Galaxy Note, but easier to hump around than a traditional laptop.                                                                                                                                                                                                                                            | from R18 500 ★★★★★<br><b>BEST FOR USING ANYWHERE</b>                                                                                                  |
| NEW               | 7  |  | <b>Sony Xperia Z3 Tablet Compact</b><br>A slim, light and reliable couch or commute companion, with a screen that looks brilliant despite being 'only' Full HD. The waterproofing may sway people away from choosing an iPad Mini and every gamer's eyes will light up at the mention of PS4 Remote Play.                                                                                                                                                                                                                | R5 900 ★★★★★☆                                                                                                                                         |
| NEW               | 8  |  | <b>Asus Transformer Book T100</b><br>A stonkingly affordable tabtop with raw power, a neat design and great battery life – perfect for Office on the go, thanks to Intel's new Baytrail CPU. The 1366x768 screen is a good one too, with crisp text, great contrast and colours that pop.                                                                                                                                                                                                                                | R5 000 ★★★★★                                                                                                                                          |
|                   | 9  |  | <b>Samsung Galaxy Note 10.1 (2014)</b><br>The new 10.1 is fit to bursting with clever tricks, comes with the note-tastic S Pen and has a stunning 2560x1600 screen. But while we can forgive it its tacky looks, minor performance glitches deny it that fifth star; we hope firmware updates will fix them.                                                                                                                                                                                                             | R7 400 ★★★★★☆                                                                                                                                         |
|                   | 10 |  | <b>Sony Xperia Tablet Z</b><br>Sony just refuses to play by the rules. Stretching its stylish Xperia Z smartphone out to 10in should have made it thicker, but it hasn't; less crisply screened, but it isn't; and not waterproof, but it is. The price for this extreme engineering, however, is high.                                                                                                                                                                                                                  | R9 000 ★★★★★☆<br><b>BEST FOR BATH-BASED TABLET FUN</b>                                                                                                |

IN CASE  
YOU  
MISSED...  
ANDROID  
WEAR



#### LG G Watch R

R3 550 / [lg.com/za](http://lg.com/za)

It might have all the specs but it looks chunky and fairly cheap. However, if the design works for you, it won't let you down in use. The vivid, circular 1.3in/3.3cm P-OLED screen is the best we've ogled on a Wear watch yet, performance is brilliant and there's 4GB of storage.

★★★★☆



#### Samsung Gear Live

Rtba / [samsung.com/za](http://samsung.com/za)

It might be more screen on a strap than watch replacement but at least the screen's a good 'un. Notifications are crisp, colours are vivid and text doesn't get cut off as on the Moto and LG. Sadly, the teeny 300mAh battery means the Gear Live rarely gets above a day's use.

★★★★☆



#### Motorola Moto 360

R3 300 / [orange.com/za](http://orange.com/za)

It's still the classiest option. We prefer the Moto's wireless charging dock, the design is comfortable and unisex, and its mics pick up Google voice commands well. Heart-rate monitoring gives you personalised activity goals and faces can be customised in the Connect app.

★★★★☆



HOT  
BUY

1

**Pebble Steel**

Unveiled at CES 2014, the Steel keeps the straightforward looks, crisp display and five-day battery life that helped the standard Pebble win our hearts. But it holds more RAM, apps and customisable faces this time, and swaps the plastic for either a 'Steel' silver or matte black stylish suit, making it look and feel more like an actual watch. The Steel goes beyond the gimmicks and into the world of real-world wearable tech. Pop it on your wristwear wish-list.

**STUFF SAYS**

The best smartwatch money can buy... and the original plastic Pebble is still available for R1 000 less

R2 850 ★★★★★

2

**Fitbit Flex**

The Flex delivers all of Fitbit's activity-tracking smarts but in a form factor that's less fiddly than its belt-clip counterparts. It's packed with Bluetooth, NFC, vibratamotor and a display. America already has the new Force band, with a proper display.

from  
R1 400  
★★★★★**BEST FOR  
TRACKING  
YOUR LIFE**

3

**Jawbone UP24**

Now with Bluetooth for hassle-free syncing, the stylish UP24 is worth the extra cash over the Jawbone Up. The app introduces new challenges and tracks your sleep patterns. It will also gently nudge you, if you're lazing around, to get back on the move.

R1 900  
★★★★★

4

**Samsung Gear Live**

Could it be fourth time lucky for Android Wear? A waterproof 1.63in/4.14cm Super AMOLED screen, a resting heart monitor and a growing selection of apps say yes. Overall, the Samsung just pips the LG G Watch. Its pitiful one-day battery life lets it down, though.

Rtba  
★★★★☆

5

**LG G Watch**

Smart, subtle and more comfortable to wear than the Samsung Gear Live above, the LG gets a lot more right than it does wrong. Its voice commands are useful and it comes with a charging cradle...but it doesn't show off Android Wear's full potential.

Rtba  
★★★★☆

6

**Garmin Forerunner 620**

Garmin's wealth of experience in wrist-mounted GPS shines through, offering up a cacophony of stats, including vertical oscillation (how much you jiggle while running) thanks to the smart heart-rate belt. Could be cheaper and more user-friendly, though.

from  
R6 350  
★★★★☆

7

**LG G Watch R**

This circular smartwatch won't win any beauty contests, but that's about its only flaw. The G Watch R's plastic OLED screen has deep blacks, sharp text and good visibility. Its battery easily lasts a day and a half, and using it is a smooth experience.

R3 550  
★★★★☆

8

**TomTom Multi-Sport Cardio**

The new version of the TomTom Multi-Sport adds an impressively accurate heart-rate sensor to an already strong formula, allowing for more focused and personal training. It'll track runs, cycles and swims, and the companion app is also much improved.

R2 900  
★★★★☆**BEST FOR  
TRIATHLETES  
IN TRAINING**

9

**Samsung Gear 2 Neo**

It's the 'budget' plastic version of Samsung's Gear 2, but does 99% of what the more expensive device can do, although it does not have a camera. Only compatible with certain phones, it is the Gear we'd be most likely to buy, but it's far from essential.

R3 000  
★★★★☆

10

**Samsung Gear Fit**

Durable, comfortable and only 55g, the Gear Fit looks great but is ultimately a bit disappointing. It has unreliable heart-rate tracking and an unresponsive curved OLED screen that's awkward to read, especially on a run. Fit by name, but not by nature.

R3 000  
★★★★☆

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HOT  
BUY

1



### Samsung 55HU8500

Who would have thought that it would be such a speedy just from unobtainable 4K video to a R40k 55in/140cm screen from Samsung – who have fixed their weird gesture control ambitions, we might add. This is an all-round wonder-set, now we just need video content to match.

### STUFF SAYS

4K without having to rob a bank or sell your house. Samsung's done good

R40 000 ★★★★★

2



### Samsung UA65F9000

Samsung's UHD TV combines a crystal clear panel with some truly smart features, including gesture and voice control, all wrapped up in some of the sleekest styling we've seen in a TV. It's 4K, it's under a hundred grand and it's smarter than the average intern.

R90 000

★★★★★

3



### Samsung PS51F5500

A superb 50in TV for under R15 000? You betcha! The F5500 is the biggest bargain in television right now, teaming a premium picture with stacks of features (full HD, 3D, smart remote) and Samsung's comprehensive Smart Hub. How did they do it? No idea.

R12 200

★★★★★

4



### LG 55LA8600

LG's 3D-capable screen ships with six pairs of passive 3D glasses, brilliant HD, contrast is great and then there is LG's presentation. It doesn't have quite as many smart features as Samsung's equivalents but there is NFC and smartphone mirroring to keep you busy.

R35 000

★★★★★

5



### Sony KD-55X9004A

Welcome to the cheap end of the 4K spectrum. Yes, it's all relative. This 55in Sony looks amazing when tasked with proper 4K content, but its main drawback is that very little of that exists yet. That said, normal HD stuff looks wonderful too.

R55 000

★★★★★

**BEST FOR  
4K EARLY  
ADOPTERS**

6



### Samsung UA48H6400

Since when was 48in a screen size for tellies? Well it turns out to be a great size to deliver really immersive movies and games without utterly dominating the average lounge. It's smart, stylish and great value for that much screen real estate.

R13 000

★★★★★

7



### Samsung UA55F8000

Samsung's UA55F8000 is, or rather was, the best on our list. More smart features than you can shake a remote at, some clever controls and a picture to die for. Pity it's been bumped down the list but there is a reason for that. 4K.

R32 000

★★★★★

**BEST FOR  
FEASTING ON  
SMART TV**

8



### Samsung UA55ES8000

Samsung's stunning 8000-series 55in/140cm LED TV range is available in four models, 46- through 65-inch (117 to 165cm) and all are excellent. As well as great 2D and 3D the Smart dashboard can be controlled through voice or gesture. Pricy, but superb picture.

R40 000

★★★★★

9



### LG 47LM9600

With seven pairs of 3D specs in the box – two of which allow for full-screen gaming – this passive 3D TV is great for social occasions. It's just been updated with the Game World portal, featuring 2D and 3D games – some playable with LG's Magic Remote.

R20 000

★★★★★

**BEST FOR  
3D MOVIES  
WITH FRIENDS**

10



### Samsung UA55ES6200R

The 3D upscaler and HyperReal image processing engine now have more horsepower to produce a better picture, it has both wifi and wired LAN and there's 3D glasses thrown in. A quality buy at the price.

R19 500

★★★★★

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iDance

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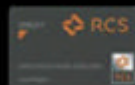
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Polaroid

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BUY

1



### Sony DSC-HX60

Last year's HX50 was our previous pick for the best compact camera around, and 2014's HX60 isn't a huge departure from its predecessor in terms of build quality, ease of use, specifications and performance — all of which are excellent. And thankfully the superb 30x zoom lens remains. What it does add is NFC (for quick pairing with a tablet or phone) and a newer Bionz X processor, making it a slightly nippier performer.

### STUFF SAYS

**Sturdy, simple to use and offering a huge zoom range for its size, this is a hugely capable all-rounder**

**R5 500 ★★★★★**

2



### Sony DSC-RX100 III

If you're looking for the best tiny snapper around, this is it. Excellent image quality, fast autofocus, a useful electronic viewfinder and professional video recording, all squeezed into a truly teeny package that'll fit into your jeans pocket. We're smitten.

**R12 000**

★★★★★

3



### Fujifilm X20

The X20 isn't all retro looks and no trousers. It excels in Advanced Auto mode and has manual controls and RAW shooting for creative days. The optical viewfinder, though small, is linked to the 4x zoom and frames well. All this, *and* it looks cool.

**R6 400**

★★★★★

4



### Panasonic Lumix DMC-FZ200

If you want a superzoom cam, the Lumix FZ200 wipes the floor with its rival snoopy snappers. A small and solid build is coupled with a 24x optical zoom, an excellent auto mode and spot-on exposure abilities. The downside is the video, which is a mixed bag

**R7 000**

★★★★★

**BEST FOR  
AT-A-DISTANCE  
SHOOTING**

5



### Fujifilm FinePix X100S

Fujifilm's souped up its fixed-lens retro shooter, with faster focusing and a big APS-C sensor. It's not all new, though, keeping the 35mm-equivalent f/2 lens and hybrid viewfinder from the X100. A less retro version with black finish is now available too.

**R12 700**

★★★★★

**BEST FOR  
DSLR PICS IN  
A SMALL BODY**

6



### Canon PowerShot G16

The G16 packs a lot into its sturdy body: optical viewfinder, loads of manual controls and an f1.8–2.8, 28–140mm (equivalent) zoom lens. Upgrades over the G15 include Wi-Fi and faster burst shooting of up to 12fps, while image quality is as good as ever.

**R6 000**

★★★★★

7



### Nikon Coolpix AW120

The ultimate rugged camera: almost indestructible, and fit for temperatures as low as -10°C, it will even survive a rinse cycle in your dishwasher. The AW120 also takes lovely pictures and impressive video in both good lighting and dimmer conditions.

**Rtba**

★★★★★

**BEST FOR  
EXTREME  
EXPLOITS**

8



### Canon PowerShot G1 X MkII

This powerful snapper is back, with a tilting touchscreen and a wider wide-angle lens but no viewfinder. The zoom and video are still fairly underwhelming but in terms of sheer image quality there aren't many non-system cameras around that can beat it.

**R11 000**

★★★★★

9



### Canon PowerShot S120

Replacing the S110, the S120 is a compact camera for DSLR users on their days off. Its 12.1MP stills, low-light prowess and useful long-exposure modes are welcome, while its slightly laggy lens-ring control and hit-and-miss Wi-Fi features take the shine off.

**R4700**

★★★★☆

10



### Nikon Coolpix S6700

Your phone can probably match it for wide-angle photos in good conditions, but if you want to go equipped with a bit more creative control without loading yourself down with kit, the S6700 will be a useful addition to your gadget arsenal.

**Rtba**

★★★★☆

## 2015'S MOST WANTED INDIE GAMES



### BEFORE

Kind of a cross between Lemmings and Chuck Rock, in *Before* you take charge of a Neanderthal tribe. The name of the game, much like back in caveman times, is to survive. You'll need to hunt for food, avoid predators and find somewhere to shelter from the elements, before deciding how to explore the world you call home.



### ADR1FT

Considering most of *Gravity* was put together inside a computer, it's fitting that 505 has made what is essentially an unofficial game of Alfonso Cuarón's movie. Floating in space with a destroyed space station and malfunctioning suit for company, you must try to stay alive long enough to fix the damaged escape pod.



### TACOMA

While *Adr1ft*'s space station has certainly seen better days, *Tacoma*'s appears to be in much better nick, even if it is deserted. Developer Fullbright made the rather introspective *Gone Home*, so you can bet *Tacoma* will be more thinky than shooty, but its *Bioshock*-in-space aesthetic means it's a place we can't wait to explore.





|                            |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                     |
|----------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HOT BUY</b><br><b>1</b> |    | <b>Olympus OM-D E-M1</b><br>Olympus' new flagship is armed with the same excellent 16.3MP sensor as its predecessor the E-M5, but now has an improved autofocus system, a startlingly good electronic viewfinder and masses of direct controls. And look out for the E-M10: pretty much an E-M5 minus the weatherproofing and with only 3-axis stabilisation, but with an improved EVF, better metering, enhanced Wi-Fi and built-in flash in a smaller, cheaper body. | <b>STUFF SAYS</b><br>Take the E-M5's amazing speed and quality, then add pro controls and you get the best system cam so far<br><b>R20 000</b> ★★★★★<br>(body only) |
| <b>2</b>                   |    | <b>Canon EOS 700D</b><br>Look, it's a new Canon at No2. No, wait, it's the old one. Actually, it's kind of both. The 700D is a minor upgrade over the 650D, keeping its 18MP sensor, flip-out touchscreen and autofocus during video and adding little beyond a new kit lens. Still great, though.                                                                                                                                                                     | <b>R7 700</b><br>(body only)<br>★★★★★<br><b>BEST FOR ALL-ROUND VALUE</b>                                                                                            |
| <b>3</b>                   |    | <b>Sony A6000</b><br>Sony's new system camera may be tiny but it packs a big photographic punch. There may be no optical image stabilisation but the incredible speed and accuracy of the A6000's autofocus is a real highlight, as is its large, clear electronic viewfinder.                                                                                                                                                                                         | <b>R8 500</b><br>(body only)<br>★★★★★                                                                                                                               |
| <b>4</b>                   |    | <b>Nikon D810</b><br>The top-end Nikon D810 is a monster camera. Its image quality and performance are hard to fault – if you're a serious photographer willing to stump up the cash then it's a fantastic buy. However, there are some features missing, such as 4K video and Wi-Fi.                                                                                                                                                                                  | <b>R52 000</b><br>(body only)<br>★★★★★                                                                                                                              |
| <b>5</b>                   |    | <b>Sony A7R</b><br>We love this camera. It's lightweight but tough and delivers results that outstrip pretty much any other compact system camera on the market. It has a huge full-frame 36.4MP sensor and noise-suppression. Your wallet might weep, but your photo album will sing.                                                                                                                                                                                 | <b>R27 000</b><br>(body only)<br>★★★★★<br><b>BEST FOR SHOOTING LIKE THE PROS</b>                                                                                    |
| <b>6</b>                   |   | <b>Nikon D600</b><br>Pro power has never come at such a reasonable price. A full-frame 24.3MP sensor combines with accurate 39-point autofocus for stunning results. Dual SD card slots, built-in flash and 5.5fps shooting speed complete a seriously powerful proposition.                                                                                                                                                                                           | <b>R23 000</b><br>(body only)<br>★★★★★                                                                                                                              |
| <b>7</b>                   |  | <b>Canon EOS 70D</b><br>The 70D is Canon's best camera in years. It's the first 'proper' DSLR to nail autofocus in videos and Live View, offers a multitude of manual controls and can take stunning pics in almost any situation. Amateurs who've outgrown the entry level should look no further.                                                                                                                                                                    | <b>R13 500</b><br>(body only)<br>★★★★★<br><b>BEST FOR ADVANCED AMATEURS</b>                                                                                         |
| <b>8</b>                   |  | <b>Fujifilm X-T1</b><br>There's lots to love about this snapper, from its clever viewfinder and lightning-speed focus to the weatherproof body. One for the analogue lovers, it has actual buttons and dials with no touchscreen. The lack of in-cam image stabilisation is our only complaint.                                                                                                                                                                        | <b>R20 000</b><br>(w/18-55mm lens)<br>★★★★★                                                                                                                         |
| <b>9</b>                   |  | <b>Panasonic Lumix GH4</b><br>Its 4K recording might grab the headlines, but the GH4 is more than that – it's Panasonic's finest all-round camera yet. Build quality is superb, autofocus is fast and accurate, image quality is great and video is even better.                                                                                                                                                                                                       | <b>R16 000</b><br>(w/14-140mm lens)<br>★★★★★<br><b>BEST FOR HI-RES VIDEO</b>                                                                                        |
| <b>10</b>                  |  | <b>Panasonic Lumix DMC-GX7</b><br>The 16MP Panasonic is a versatile beast that, while not being much of a looker, has added tricks such as a tilting EVF and a handy touchscreen LCD. It's great for smooth hi-def video recording and, with the bijou 20mm f/1.7 lens, is a great travel companion.                                                                                                                                                                   | <b>R14 000</b><br>(body only)<br>★★★★★                                                                                                                              |

IN CASE  
YOU MISSED  
PAGE 71...  
MULTIROOM  
AUDIO



#### Bluesound

from R6 950 (import)

This is a system that's all about putting sound quality first, with support for hi-res files up to 24-bit/192kHz. It's not picky either: anything you play through it has the same full-bodied presentation that works with all genres. It's the best option for audio nerds.

★★★★★



#### Pure Jongo X

from R900 (import)

The newly updated Pure Connect app makes a great first impression, with step-by-step instructions bringing Sonos levels of simplicity, although you can't access any other streaming services. If you're on a budget, this should definitely be on your list.

★★★★★



#### Samsung M Series

from R4 000

The three all-in-one speakers have the same triangular design that allows them to be used either laid flat or stood upright. It's not quite as seamless as the Sonos family yet, with local and online music sources not working together, but it's not far off.

★★★★★



#### Sonos

from R4 500

When it comes to multiroom audio systems, Sonos has pretty much single-handedly shaped the market. And its experience shows in both breadth of choice and simplicity of use. Although it doesn't support hi-res audio, this is still a stylish option.

★★★★★

HOT  
BUY

1

**Grand Theft Auto V** Xbox 360

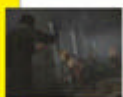
Rockstar Games releases titles slowly but, like your average tsunami, you will know when it hits. Grand Theft Auto V is a cerebral shotgun blast of a game worthy of carrying on the series' mantle. The story, the sandbox and the sick-leave Stuff has put in just to play more of it...not to mention how good it makes current-gen consoles look.

**STUFF SAYS**

GTA V's trio of criminals have set a new bar in the world of gaming

from R700 ★★★★★

2

**The Last of Us** PS3

Now remastered for PS4, this is the best zombie-apocalypse game ever. It looks magnificent and plays even better, with a moving story and frights aplenty. It's tough... but then a real-life zombie apocalypse would be. Think of this as essential prep.

from R700  
★★★★★

3

**Forza Horizon 2** Xbox One

This is everything an open-world driving game should be. There's loads to do and it captures the feeling of driving very fast better than any other racing game, to the point where *Forza Horizon 2* could soon eclipse its older brother once and for all.

from R550  
★★★★★

4

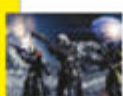
**Call of Duty: Advanced Warfare** PC/PS3/ PS4/Xbox One/Xbox 360

An improvement on last year's *Ghosts*, with some actual innovation from the series' multiplayer gameplay. We're going to be losing many, many man-hours to the Exo-powered trash-talk. Time for another support drop to come in.

from R700  
★★★★★

**BEST FOR**  
ONLINE  
TEAM PLAY

5

**Destiny** PS4/Xbox One

This isn't for everyone, and those hoping for an epic *Halo*-style campaign may be disappointed. But in every other way, *Destiny* is on a bigger, far more multiplayer level, and with the added addictive quest for loot like *Diablo* – an irresistible combination.

from R750  
★★★★★

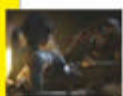
6

**FIFA 15** PS4/Xbox One

If *FIFA 14* was Barcelona's tiki-taka – death by 1000 passes – then *FIFA 15* is Germany's more explosive World-Cup-winning evolution of it. Harder, faster and stronger: this is a better reflection of modern football than ever before.

from R450  
★★★★★

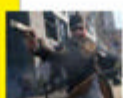
7

**Tomb Raider** PC/PS3/Xbox 360

Yes, it's a Franchise Reboot, but the well-paced mixture of puzzles, action sequences, gun fights and stealth make the latest Lara Croft adventure an immersive, cinematic experience. Possibly the best fun we've ever had pretending to be a 21-year-old girl.

from R300  
★★★★★

8

**Watch Dogs** PC/PS3/PS4/Xbox 360

Ignore the storyline, it can be a little weak but Ubisoft's techno-Chicago is a fine place to play out your master-technomancy fantasies in a GTA-like arena of connected chaos. As for the multiplayer, it was nice knowing you. See you next month.

R880  
★★★★★

**BEST FOR**  
HACKING  
THE PLANET

9

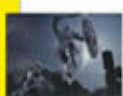
**Mario Kart 8** Wii U

Building upon lesser recent entries while adding flashy new twists and delightful physics-defying courses, *Mario Kart 8* is a rare Wii U highlight. Although single-player still lacks punch, multiplayer is endlessly entertaining: it's glossy and fluid throughout.

from R700  
★★★★★

**BEST FOR**  
SPLIT SCREEN  
ARGUMENTS

10

**Dark Souls II** PC/PS3/Xbox 360

You might never play a tougher game than this old-school action-RPG sequel, which drops you into the mystical land of Drangleic and lets you figure things out for yourself. Mostly by being killed... but that just makes it all the more rewarding when you get it right.

from R700  
★★★★★

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|                            |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                          |
|----------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HOT BUY</b><br><b>1</b> |  | <b>AKG K451</b><br>They've actually been around a little while now, but what put the K451 on-ears back on to our radar was an official price drop, and a real-world price of just R1500 or less. For that money they're unbeatable – awesomely agile and punchy sound wrapped up in a subtly stylish and foldable design. Add both standard and three-button control cables for maximising compatibility and there's practically no excuse for not getting brilliant sound from your phone. | <b>STUFF SAYS</b><br>Fantastic sound and great portability at an almost unbeatable price. The perfect PMP upgrade<br><b>R1 500 ★★★★★</b> |
| <b>2</b>                   |  | <b>Bowers &amp; Wilkins P3</b><br>Superb sound and a solid and achingly stylish design make these the best portable on-ears around. The fact that two cables come in the box – one with a mic and remote for iPhones, one without – only sweetens the already candyfloss-like deal.                                                                                                                                                                                                         | <b>R2 500 ★★★★★</b><br><b>BEST FOR ON-EAR EXCELLENCE</b>                                                                                 |
| <b>3</b>                   |  | <b>SoundMagic E10</b><br>Yes, we also gave the very similar SoundMagic ES20s in-ears five stars. And they thoroughly deserve it. But we chose to keep these here because the more expensive E10s still represent a killer smiles-per-pence, sound-per-pound ratio.                                                                                                                                                                                                                          | <b>R700 (import) ★★★★★☆</b>                                                                                                              |
| <b>4</b>                   |  | <b>Sennheiser RS220</b><br>The specialised lossless encoding and transmission system makes these the closest we've ever come to perfect wireless sound across all music types, and despite its intimidating size, the low weight and luxuriant fit helps you forget they are there.                                                                                                                                                                                                         | <b>R5 400 ★★★★★☆</b><br><b>BEST FOR ON-EAR EXCELLENCE</b>                                                                                |
| <b>5</b>                   |  | <b>Sol Republic Master Tracks</b><br>Really tough things are usually really ugly, which is why the lovely styling of the "virtually indestructible" Master Tracks headphones is so refreshing. Loud, punchy, fast and controlled, the sound is just as attractive as the design. Worth every penny.                                                                                                                                                                                         | <b>R3 900 ★★★★★</b>                                                                                                                      |
| <b>6</b>                   |  | <b>Final Audio Design Adagio III</b><br>Calling a pair of headphones Adagio seems a bit pretentious, but these decidedly affordable in-ears from a Japanese company that usually occupies the most bonkers reaches of high-end earn it with brilliantly detailed and endlessly attacking sound.                                                                                                                                                                                             | <b>R1 100 (import) ★★★★★</b>                                                                                                             |
| <b>7</b>                   |  | <b>Bose AE2w</b><br>We're not going to pretend that the protruding Bluetooth module isn't a rather ugly touch, but what's most important is that these Bose headphones deliver wireless sound of superb quality. We'll put up with looking a wee bit daft for musical magic.                                                                                                                                                                                                                | <b>R3 000 ★★★★★</b><br><b>BEST FOR GREAT SOUND WITH NO WIRES</b>                                                                         |
| <b>8</b>                   |  | <b>Sennheiser Momentum</b><br>Classily styled, cushion-comfortable and smooth-sounding, the Momentums are the perfect over-ears for the dapper man about town. There's also an on-ear version – smaller and cheaper at R2 500, available in pink, blue, green and, um, ivory/brown.                                                                                                                                                                                                         | <b>R4 000 ★★★★★☆</b><br><b>BEST FOR QUALITY AND STYLE IN ONE</b>                                                                         |
| <b>9</b>                   |  | <b>Sony MDR-1R</b><br>You get the feeling Sony put everything they know about sound into these headphones, cutting no corners and sparing no expense. The result is an audiophile's delight: a "true", but still exciting sound across all music genre. Pricey and too big to lug around.                                                                                                                                                                                                   | <b>R2 500 ★★★★★</b>                                                                                                                      |
| <b>10</b>                  |  | <b>Harmon Kardon NC</b><br>Hifi maker Harmon Kardon has managed to meet and exceed unreasonably high expectations. Noise cancelling helps you appreciate the full range, detail and balance of this rousing audio performance. Smaller CL and cordless BT models also available.                                                                                                                                                                                                            | <b>R3 150 ★★★★★</b>                                                                                                                      |

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# NEXT BIG THING?



## CINEMATIC REALITY

**Y**

**ou're a bit late on this — whales have been around for millions of years.**

Yes, whales are a bit last-gen. But did you know their clicking sounds have regional accents? Anyway, this isn't about real Moby-Dicks, as you can tell from the relaxed demeanour of those beach-folk. This is about a new form of hyper-real augmented reality, created by Magic Leap. The Florida-based company hasn't officially announced anything yet, but private demos have been good enough to convince Google et al to pump \$500 million into what Magic Leap is calling 'cinematic reality'.

**My local cinema's already got 'cinematic reality'.**

Well, this is bit more futuristic than watching a film in the dark with a load of popcorn rustlers. Magic Leap's website gives away some clues, showing realistic CGI creations overlaid on everyday scenes, and they claim this will transcend augmented reality and virtual reality to create 'the most natural and human-friendly wearable computing interface in the world'. Magic Leap's patents suggest it could be a head-mounted 'light field' display that gives AR actual depth by beaming images onto your retina, rather than focusing on a flat screen.

**Not again. I don't want a computer on my face!**

You'll change your mind if you see Magic Leap's collaboration with Framestore and Professor Brian Cox. They're doing a live show called 'The Age Of Starlight', which will debut at the Manchester International Festival in July. The physicist told the BBC: "It allows you to put digital images into your field of view directly. I saw the prototype in Miami a few months ago and it's stunning. It's going to be transformative technology, there's no doubt about that." So there you have it — Brian's never wrong about anything. Well, apart from music.

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